

C.E. EAPEN

Loyola College 1964 1965



MONTREAL, CANADA

General Calendar

**Loyola
College
calendar**

Loyola
College
calendar

Loyola
College
calendar

Ad Maiorem Dei Gloriam

Loyola College calendar



1964
1965

ARTS • SCIENCE • ENGINEERING • COMMERCE

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Loyola College calendar

Monday, September 21

Lectures begin.

Thursday, October 1

Last day for Registration.

Wednesday, October 9

Last day for course changes.

Monday, October 12

Thanksgiving Day — full holiday.

Wednesday, November 11

1.00 p.m. — Anniversary Mass for the deceased members of the staff and students.

Tuesday, December 15

Freshman mid-year tests begin.

Tuesday, December 22

Last day of lectures before Christmas vacation.

1965

Monday, January 4

Mid-year final examinations begin in all faculties.

Friday, January 8

Second term lectures begin.

Friday, January 29

Father President's Holiday.

Friday, March 12

Celebration of the Feast of St. Ignatius Loyola.

Wednesday, April 14

Last day of lectures before Easter recess.

Tuesday, April 20

Final examinations begin.

Saturday, May 22

Convocation.

the board of trustees

Very Rev. Patrick G. Malone, S.J., B.A., Ph.L., M.A., S.T.L.,
President

Very Rev. Hutchinson Mitchell, S.J., B.A., Superior

Rev. Cyril B. O'Keefe, S.J., M.A., Ph.D.

Rev. Thomas J. Mullally, S.J., Ph.D., Treasurer

Rev. Aloysius Graham, S.J., B.A., M.A., S.T.L., Secretary

Rev. Ernest C. Tyler, S.J., B.A., M.Ed.

Rev. Hugh J. MacPhee, S.J., B.A., M.A., S.T.L.

Mr. Timothy P. Slattery, Q.C., M.B.E., Legal Adviser

board of governors

Very Rev. Patrick G. Malone, S.J.

His Excellency, General Georges P. Vanier

Major-General Frank J. Fleury

Murray Ballantyne

Dr. Robert J. Brodrick

Hon. Paul Casey

Lieut. Col. Stanley D. Clarke

F. Ronald Graham

Frederick Kearns

A. F. Mayne

Clifford S. Malone

Rev. Thomas J. Mullally, S.J.

Frank McDougall

Rev. C. B. O'Keefe, S.J.

J. H. Ranahan

Salvatore Randaccio

Monsignor Martin P. Reid

T. P. Slattery

L. H. Timmins

A. K. Velan

C. H. Wayland

J. M. Wynn

officers of administration

Very Rev. Patrick G. Malone, S.J., B.A., Ph.L., M.A., S.T.L.,
President
Very Rev. Hutchinson Mitchell, S.J., B.A., Superior
Rev. Cyril B. O'Keefe, S.J., M.A., Ph.D., Dean of Studies
Mr. M. L. Bessner, B. Comm., L.A., C.A., Director of Commerce
Rev. A. Graham, S.J., M.A., S.T.L., Associate Dean of Science
Mr. G. Joly, B.A., B.Eng., M.A., S.T.L., Associate Dean of Engineering
Mr. A. G. Lallier, B.A., M.A., Director of Evening Division
Rev. W. Ryan, S.J., B.A., M.A., S.T.L., Ph.D., Associate Dean of Arts
Rev. J. Gerard McDonough, S.J., B.A., M.A., Dean of Men
Rev. Gerald W. Tait, S.J., B.A., Ph.L., M.A., S.T.L., Registrar
Mr. Thomas Murphy, B. Comm., Assistant Registrar
Miss Eileen Gibbons, Assistant Registrar (Records)
Rev. J. S. O'Neill, S.J., B.A. (Montreal), Ph.L. (L'Immaculée-Conception), B. Paed. (Manitoba), M.Sc. (Fordham), Student Counsellor
Mr. George Trowsdale, B.A. (Lib.Sc.), Librarian
Rev. Thomas J. Mullally, S.J., Ph.D., Treasurer
Mr. A. J. Ferrari, B. Comm., C.A., R.I.A., Comptroller
Mr. J. Stirling Dorrance, B.A., M.A., Director of Development
Mr. Ewart Williams, B.A., B.C.L., Public Information Officer
Mr. John Kennedy, B.A., B.P.E., Director of Athletics
Major Stanley Matulis, C.O., Loyola College C.O.T.C.
Capt. Kevin G. Troughton, Resident Staff Officer
Mr. Ernest Steynor, B.A., Placement Officer

Loyola college faculty association

Dr. Michael Blamar, President
Rev. G. O'Brien, S.J., Vice-President
Mr. R. T. Coolidge, Secretary
Dr. Kurt Ekler, Treasurer

faculty

ADAMS, F.G.W., B.A. (Toronto), M.A. (Toronto), Ph.D. (Chicago), Associate Professor and Chairman of the Department of History.

ALLAIRE, G., B.M. (Montreal), M.A. (Connecticut), Ph.D. (Boston), Lecturer and Director of Music.

ALVI, S.A., B.A. (Karachi), M.A. (Karachi), Ph.D. (Colorado), Assistant Professor on leave of absence from the Department of Economics.

ANASTASIA, Rev. Sr. MARIA, O.S.B., Ph.D. (Freiburg), Lecturer, Department of Modern Languages.

ARNOLD, W., B.A. (Montreal), M.A. (Montreal), Assistant Professor, Department of Philosophy.

BANDRAUK, A.D., B. Sc. (Montreal), M. Sc. (Massachusetts Institute of Technology), Lecturer, Department of Chemistry.

BANFIELD, Miss J., B.A. (B.C.), L.L.B. (B.C.), M.A. (Toronto), Assistant Professor, Department of History.

BATIUK, E., B. Eng. (McGill), Lecturer, Department of Mathematics.

BECKA, R., B. Sc. (John Carroll), M.A. (St. Louis), Ph.D. (Ottawa), Assistant Professor, Department of Philosophy.

BEDARD, W., O.F.M., B.A. (Montreal), S.T.D. (Catholic U. of A.), Instructor, Department of Theology.

BENJAMIN, I., B.Sc. (Rostov), D. Sc. (Prague), Associate Professor, Department of Mathematics.

BERGMANN, H.J., B. Sc. (Alberta), Lecturer in Geotechnical Science.

BESSNER, M.L., B. Comm. (McGill), L.A. (McGill), C.A., Associate Professor, Chairman of the Accounting Department and Director of Commerce.

BLAIKIE, P.M., B.A. (Bishops), B.A. (Oxford), Lecturer, Department of Economics.

BLANAR, M., B.A. (Montreal), B. Paed. (Montreal), M.A. (Montreal), Ph.D. (Montreal), Associate Professor, Department of English.

BONDER, G.M., B. Comm. (McGill), L.A. (McGill), C.A., Lecturer, Department of Accounting.

BONYUN, D.A., B.A. (Bishops), M.A. (McGill), Lecturer, Department of Mathematics.

BUELL, J., B.A. (Montreal), M.A. (Montreal), Ph.D. (Montreal), Associate Professor, Department of English.

COOLIDGE, R., B.A. (Harvard), M.A. (California), B. Litt. (Oxford), Assistant Professor, Department of History.

COUVRETTE, J.J., B. Ph. (Montreal), L. Ph. (Montreal), Lecturer, Department of Modern Languages.

COPP, J.T., B.A. (S.G.W.), M.A. (McGill), Lecturer, Department of History.

COYTE, R.C., B.A. (Oxford), diploma in Political Science and Economics (Oxford), Lecturer, Department of Political Science.

CRAN, Mrs. E.E., B.A. (McGill), M.A. (Radcliffe), Assistant Professor and Acting Chairman of the Department of Classics.

CRONIN, R.T., S.J., B.A. (Montreal), M. Sc. (Fordham), Assistant Professor, Department of Biology.

DECHENE, A.C., Jr., B.A. (Notre Dame), Lecturer, Department of Theology.

DENISON, P.J., B.A. (Toronto), M.A. (Toronto), Lecturer, Department of Geotechnical Science.

DOUGHTY, M., B. Sc. (London), Ph.D. (London), Assistant Professor, Department of Chemistry.

DOYLE, J.P., B.A. (Montreal), B. Paed. (Montreal), M.A. (Montreal), Assistant Professor and Acting Chairman of the Department of Philosophy.

DRUMMOND, S., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L., Ph.D. (Toronto), Professor and Chairman of the Department of Biology.

EAPPEN, C.E., B. Sc. (Travancore), M. Sc. (Bombay), Ph.D. (McGill), Assistant Professor, Department of Physics.

ENGLISH, J.J., S.J., B. Sc. (B.C.), B.A. (Montreal), S.T.B. (Regis), Lecturer, Department of Theology.

EKLER, K., B. Sc. (McGill), Ph. D. (McGill), Associate Professor, Department of Chemistry.

GEIGER, L.B., O.P., Ph.D. (Institut Catholique), Mag. S. Th., Instructor, Department of Theology.

GOING, Miss C.M., B.A. (Albertus Magnus), Ph.D. (St. Mary's, Notre Dame), Assistant Professor, Department of Theology.

GRAHAM, A., S.J., M.A. (Toronto), S.T.L. (Gregorian), Associate Professor and Chairman of the Department of Chemistry. Associate Dean of Science.

GUADAGNI, F., B. Eng. (McGill), Associate Professor, Department of Engineering.

HABIB, H., B.A. (American University of Beirut), M.A. (Fordham), Ph.D. (McGill), Assistant Professor and Chairman of the Department of Political Science.

HAMPER, A., B.A. (McGill), Lecturer, Department of Modern Languages. Director of the Language Laboratory.

HARVEY, J., S.J., Ph.L., S.T.L. (Montreal), S.S.D. (Pontifical Biblical Institute), Instructor, Department of Theology.

HAYES, F.J., B. Sc. (London), Ph.D. (McGill), Associate Professor and Chairman of the Department of Economics.

HENKEY, Rev. C.H., Ph.D. (Gregorian), B.C.L. (Gregorian), S.T.D. (Gregorian), Associate Professor and Acting Chairman of the Department of Theology.

HEWSON, C.G., B.A. (McGill), Lecturer, Department of Mathematics.

HINNERS, R.C., B.A. (Harvard), M.A. (Toronto), Ph.D. (Toronto), Associate Professor, Department of Philosophy.

HOOPER, A.G., B.A. (Leeds), M.A. (Leeds), Ph.D. (Leeds), Professor, Department of English.

HUDSON, D., B. Sc. (Montreal), B. Eng. (McGill), Assistant Professor, Department of Engineering. Director of Freshmen.

JOLY, G., B.A. (Montreal), B. Eng. (McGill), M. Sc. (McGill), Associate Dean and Chairman of the Department of Engineering.

KAWCZAK, A.S., LL.M., M.A. (Cracow), Ph.D. (Warsaw), Assistant Professor, Department of Philosophy.

KAWAJA, M., B. Sc. (McGill), Lecturer in Business.

KRAKOW, K.I., B. Eng. (McGill), M.Sc. (California Institute of Technology), Assistant Professor, Department of Engineering.

LALLIER, A.G., B.A. (McGill), M.A. (Columbia), Certificate of the Russian Institute (Columbia), Assistant Professor, Department of Economics. Director of the Evening Division.

LAU, H.H., Diplôme d'Etudes Supérieures de Philosophie (Saulchoir), M.A. (Montreal), Assistant Professor, Department of Modern Languages.

LAUZIERE, A.E., B.A. (Ottawa), M.A. (Montreal), Ph.D. (Sorbonne), Professor, Department of Modern Languages.

LEGGE, J.C., B.Sc. (Alberta), M.Sc. (Alberta), Lecturer, Department of Physics.

LEMPKOWSKI, J.E., B.A. (Chicago), M.A. (Chicago), Lecturer, Department of Classics.

LITTLE, J.M., B.A. (Manitoba), M.A. (Toronto), Assistant Professor, Department of Political Science.

MacDONALD, D.F., B. Comm. (S.G.W.), C.A., Lecturer in Accounting.

MacGUIGAN, G., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L., Associate Professor and Chairman of the Department of English.

MACKRISS, J., B.A. (Toronto), B.L.S. (McGill), M.A. (Toronto), Lecturer, Department of Modern Languages.

MacPHEE, E.A., B.A. (St. Dunstan's), Lecturer, Department of Physics.

MacPHEE, H.J., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L., Professor and Chairman of the Department of Physics.

MAJUMDAR, K.N., B. Sc. (Calcutta), Ph.D. (Purdue), Assistant Professor, Department of Mathematics.

McDONOUGH, G., S.J., B.A. (Montreal), M.A. (West Baden), Dean of Men.

McDOUGALL, D., B. Sc. (McGill), M. Sc. (McGill), Ph.D. (McGill), Associate Professor and Chairman of the Department of Geotechnical Science.

McELCHERAN, D., M. Sc. (McMaster), Ph.D. (Leeds), Associate Professor, Department of Chemistry.

McGOVERN, J.F., B.A. (Fordham), M.A. (Wisconsin), Assistant Professor, Department of History.

McGRATH, C., B.A. (Bellarmino College, Plattsburg), Ph.L. (Fordham), Ph.D., Assistant Professor, Department of Theology.

McGRAW, R.L., B. Comm. (McGill), L.A. (McGill), C.A., Assistant Professor, Department of Accounting.

MICHALSKI, A.S., B.A. (McGill), M.A. (Princeton), Assistant Professor and Acting Chairman of the Department of Modern Languages.

MORGAN, J.D., B.A. (Loyola, Los Angeles), M.A. (Southern California), Assistant Professor, Department of Philosophy.

NEILSON, S.A., B. Sc. (McGill), Lecturer, Department of Engineering.

NELSON, Rev. A.J., S.J., B.A. (Montreal), M.A. (McGill), S.T.L. (West Baden), Associate Professor, Department of Modern Languages.

NOGRADY, T., M. Sc. (Budapest), Ph.D. (Budapest), Associate Professor, Department of Chemistry.

O'BRIEN, D.J., B.A. (Notre Dame), Assistant Professor, Department of History.

O'BRIEN, E., S.J., B.A. (Montreal), Ph.L. (Regis), S.T.L. (Montreal), S.T.D. (Louvain), Professor and Chairman of the Department of Theology, on leave of absence.

O'BRIEN, G., S.J., B.A. (Montreal), M.A. (St. Mary's), S.T.L. (Regis), S.T.D. (Woodstock), Assistant Professor, Department of Theology.

O'BRIEN, J.E., S.J., B.A. (Montreal), S.T.B. (St. Mary's), S.T.L. (Regis), Ph.D. (Southern California), Assistant Professor of Communications.

O'CONNOR, A.G., B.A. (Montreal), B. Sc. (McGill), M.A. (Montreal), Ph.D. (Montreal), Sessional Lecturer, Department of Philosophy.

O'CONNOR, R.E., S.J., B.A. (St. Mary's), M.A. (Toronto), Ph.D. (Harvard), S.T.L., Professor and Chairman of the Department of Mathematics.

O'KEEFE, C.B., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L., Ph.D. (Toronto), Associate Professor of History and Dean of Studies.

PAVITT, Mrs. M., B.A. (American University of Cairo), Lecturer, Department of Modern Languages.

PILLAI, N.G., B.A. (Delhi), M.A. (Delhi), Assistant Professor on leave of absence from the Department of Economics.

PRILLO, A., B. Sc. (Montreal), M.A. (Toronto), Associate Professor, Department of Mathematics.

REIDY, M.F., A.B. (Boston College), M.A. (Toronto), Assistant Professor, Department of Philosophy.

ROESCH, E.J., B.A. (John Carroll), M.A. (Western Reserve), Ph.D. (Ottawa), Assistant Professor, Department of Philosophy.

ROONEY, J.T., A.B. (St. Peter's College, Jersey City), M.A. (Harvard), Assistant Professor, Department of English.

ROUBEN, C., B.A. (S.G.W.), Licence ès Sciences (Paris), Lecturer, Department of Modern Languages.

RUIGH, R.E., B.A. (Iowa), M.A. (Iowa), Assistant Professor, Department of History.

RYAN, W., S.J., B.A. (Montreal), M.A. (St. Louis), S.T.L., Ph.D. (Harvard), Assistant Professor, Department of Economics and Associate Dean of Arts.

SAINT PIERRE, L.A., B.C.L. (McGill), Lecturer in Commercial Law.

SANTHANAM, S., M.A. (Madras), M. Sc. (Queen's), Assistant Professor, Department of Physics.

SAVAGE, D., B.A. (McGill), Ph.D. (London), Assistant Professor on leave of absence from the Department of History.

SCAVONE, D.C., B.A. (Loyola, Chicago), Lecturer, Department of Classics.

SIMCOE, L. B.A. (McGill), B.C.L. (McGill), Assistant Professor, Department of Economics.

SMITH, L.C., B. Eng. (McGill), Lecturer, Department of Physics.

SORIC, J.C., B. Sc. (McMaster), M. Sc. (McMaster), Lecturer, Department of Mathematics.

SRIVASTAVA, T., B. Sc. (Lucknow), M. Sc. (Lucknow), Lecturer, Department of Mathematics.

SUGDEN, L. W., B.A. (Manitoba), M.A. (Manitoba), Lecturer, Department of Modern Languages.

TAIT, G.W., S.J., B.A. (Montreal), M.A. (St. Mary's), Ph.L. (L'Immaculée Conception), S.T.L. (Regis), Registrar.

TOUPIN, P., B.A. (Montreal), M.A. (Columbia), Assistant Professor, Department of Modern Languages.

VICAS, A.G., B. Comm. (McGill), M.A. (Princeton), Assistant Professor, Department of Economics.

WARDELL, H., S.J., B.A. (Montreal), Instructor in Mechanical Drawing.

WARDY, Mrs. B., B.A. (McGill), Lecturer, Department of Classics.

WAREHAM, R., B.A. (R.M.C.), M.A. (Michigan), Assistant Professor, Department of English.

WATERS, Mrs. K.E., B.A. (McGill), M.A. (Oxford), Assistant Professor, Department of English.

WHITEHALL, E.C., C.A. Lecturer, Department of Accounting.

YALCIN, A.S., B. Eng. (Cornell), M. Sc. (Cornell), Ph. D. (Toronto), Associate Professor, Department of Geotechnical Science.

YATES, Miss D., B.A. (Dalhousie), B. Ed. (Acadia), Certificat de Français Littéraire, (Sorbonne), Lecturer, Department of Modern Languages.

THE FACULTY COMMITTEES FOR THE ACADEMIC YEAR

THE COMMITTEE ON ACADEMIC STANDING:

Whose duty is to review the policy on Academic Standing and promotion, to advise the Dean on policy covering appeals from students; to review final examination results.

MEMBERS:

Chairman	Rev. C. B. O'Keefe, S.J.
Secretary	Mr. L. M. Bessner
	Mr. John Doyle
	Rev. A. Graham, S.J.
	Dr. H. Habib
	Dr. F. Hayes
	Dean G. Joly
	Mr. J. Lempkowski
	Rev. G. Tait, S.J.

THE COMMITTEE ON ADMISSIONS:

To examine the policy on admissions, and to recommend modification in the regulations, when necessary

MEMBERS:

Chairman	Rev. G. MacGuigan, S.J.
	Dr. R. Becka
	Mr. D. Hudson
	Dean G. Joly
Secretary	Mr. A. Lallier
	Mr. R. McGraw
	Mr. A. Michalski
	Dr. T. Nogrady
	Mr. A. Prillo
	Mrs. K. Waters
	Rev. G. Tait, S.J.

THE COMMITTEE ON APPOINTMENTS, RANK AND TENURE

Its function is to recommend policies and procedures for the appointment and promotion of Faculty members.

MEMBERS:

Chairman	Rev. H. MacPhee, S.J.
	Dr. F. G. W. Adams
	Mr. L. M. Bessner
	Dr. A. Hooper
	Rev. C. B. O'Keefe, S.J.

THE CURRICULUM COMMITTEE:

To examine the present program of studies and requirements for degrees; to recommend adjustments in the program, when these are necessary.

MEMBERS:

Chairman	Dr. A. S. Yalcin
	Dr. F. G. W. Adams
	Dr. R. Hinners
	Mr. A. Lallier
	Rev. H. MacPhee, S.J.
	Rev. E. O'Brien, S.J.
	Rev. C. B. O'Keefe, S.J.
Secretary	Rev. W. Ryan, S.J.
	Mr. R. Wareham

THE LIBRARY BOARD

To formulate library policies and to advise the Librarian in the carrying out of these policies. The Committee reports to the Rector and, on occasion, to the Board of Studies.

MEMBERS:

Chairman	Dr. J. Buell
Secretary	Mr. A. Lallier
	Mr. J. Mackriss
	Dr. D. McElcheran
	Rev. G. O'Brien, S.J.
	Rev. C. B. O'Keefe, S.J.
	Dr. E. J. Roesch
Librarian	Mr. R. Ruigh
	Mr. G. Trowsdale

THE COMMITTEE ON RELIGIOUS ACTIVITIES:

Its function is to coordinate the religious activities of the College. The Committee reports to the Rector.

MEMBERS:

Chairman	Rev. J. S. English, S.J.
	Rev. A. Graham, S.J.
	Rev. C. Henkey
	Rev. G. McDonough, S.J.
	Rev. G. W. Tait, S.J.

THE COMMITTEE ON RESEARCH:

To recommend to the Rector and the Board of Studies a coordinated policy on research, covering all the research activities of the college; to devise procedures covering the submission, consideration, and approval of research projects.

MEMBERS:

Chairman	Dr. R. Hinners Rev. S. Drummond, S.J. Rev. C. Henkey Rev. H. MacPhee, S.J. Dr. T. Nogrady
Secretary	Dr. D. Savage

THE SCHOLARSHIP COMMITTEE:

To examine the policy on scholarships and bursaries. The Committee reports to the Rector, and on occasion, to the Board of Studies.

MEMBERS:

Chairman	Rev. W. Ryan, S.J. Dr. D. McDougall Dr. D. McElcheran Mr. J. Morgan Rev. G. Tait, S.J. Mr. A. G. Vicas
(sub-committee on graduate awards and programs)	
	Dr. M. Blonar

THE COMMITTEE ON STUDENT LIFE:

Its function is to act as a coordinating body dealing with the non-academic activities of the students. The Committee reports to the Rector.

MEMBERS:

	Mr. D. Hudson Mr. J. Kennedy Rev. G. McDonough, S.J. Mr. J. F. McGovern Rev. C. B. O'Keefe, S.J. Rev. G. Tait, S.J.
(ex officio)	

SUB-COMMITTEES:

Residence Hall Committee:

Chairman	Rev. G. McDonough, S.J. Mr. R. T. Coolidge Mr. C. Hewson Rev. R. McDougall, S.J. Mr. M. Reidy
-----------------	---

DISCIPLINE: — Sub-Committee:

Dr. H. Habib
Rev. G. McDonough, S.J.
Dr. D. McDougall
Rev. R. McDougall, S.J.
Rev. G. O'Brien, S.J.
Mr. M. Reidy

AD HOC COMMITTEES:

Sub-Committee on the Scheduling of Lectures and Examinations:

MEMBERS:

Chairman	Mr. F. Guadagni Mrs. E. E. Cran Rev. S. Drummond, S.J.
Secretary	Mr. C. Hewson Mr. R. McGraw Rev. G. Tait, S.J.

College Calendar Committee:

Dr. M. Blonar
Mr. T. Murphy (Assistant Registrar)

COMMITTEE ON VISITING LECTURERS, SPECIAL SPEAKERS, ETC.

Chairman	Dr. H. Habib Mr. J. S. Dorrance Dr. K. Ekler Dr. K. Going
-----------------	--

SUB-COMMITTEE ON COLLEGE AND UNIVERSITY TELEVISION.

Chairman	Mr. D. Hudson Dr. J. Buell Mr. J. S. Dorrance
-----------------	---

These are small committees and report to the Dean of Studies and the Board of Studies.

OTHER FACULTY APPOINTMENTS:

Advisor to Women Students	Miss K. Cooper
CUSO	Mr. C. McGrath
WUSC	Dr. F. G. W. Adams
Computer	Mr. D. A. Bonyun
Faculty Council —	
Science and Engineering	Dr. D. McDougall
Arts	Rev. G. MacGuigan, S.J.
Commerce	Mr. M. L. Bessner

BOARD OF STUDIES:

Chairman

Rev. C. B. O'Keefe, S.J.
Dr. F. G. W. Adams
Mr. M. L. Bessner
Mrs. E. E. Cran
Mr. J. P. Doyle
Rev. S. Drummond, S.J.
Rev. A. Graham, S.J.
Dr. H. Habib
Dr. F. Hayes
Dr. H. Hinners
Dean G. Joly
Mr. A. G. Lallier
Rev. G. MacGuigan, S.J.
Rev. H. J. MacPhee, S.J.
Dr. D. McDougall
Mr. J. F. McGovern
Mr. A. S. Michalski
Rev. E. O'Brien, S.J.
Rev. R. E. O'Connor, S.J.
Rev. W. Ryan, S.J.
Rev. G. Tait, S.J.

Secretary

EVENING DIVISION COMMITTEE:

Director of Evening Division

Mr. A. G. Lallier
Dr. M. Blamar
Dr. K. Ekler
Rev. A. Nelson
Mr. E. C. Whitehall
Dr. A. S. Yalcin

history of Loyola College

The origins of Loyola College may be traced to the opening of the Collège Ste-Marie in 1848, which resumed in Montreal the work of the historic Jesuit College of Quebec, opened in 1635. From its conception the classical course at the Collège began with both languages, French and English, on an equal footing. From 1888 to 1896 the classical course in English was operated as distinct from that in French, both considered separate units within one institution.

On September 2, 1896, Loyola College was opened at 2084 St. Catherine Street West, but only on February 2, 1899 was Loyola College incorporated by an Act of the Quebec Legislature. It had its origin in the separate course, inaugurated ten years earlier, for the English-speaking students at Collège Ste-Marie. On February 5, 1899, Laval University officially extended its Bachelor of Arts degree to Loyola students under the special privileges granted by the Holy See in its Constitution *Jamdudum*, and the first degrees were awarded by Laval in 1903. A similar arrangement was made with the University of Montreal when it was established. In consequence of these arrangements, Loyola was assured of complete autonomy and independence in the shaping of its curriculum and in the conducting of its examinations in Arts courses; degrees being granted by the University of Montreal. Loyola instituted its Faculty of Science in 1943 and its Faculty of Commerce in 1948. All courses in the three faculties are conducted at the College,

and by special arrangement the University of Montreal grants B.Sc. and B.Comm. degrees to students who have successfully completed their courses in these faculties. The curriculum and examinations of these courses, however, are under the control of the University.

Since the early days of Loyola, many changes have occurred, especially evident in the evolution of curriculum which more and more set the College in the Anglo-Canadian tradition. For instance, the eight-year course was broken up into two distinct four-year units (1919) and options were introduced (1921), confirming three distinct courses, at least in the last two years of college; Arts (General), Arts (Pre-Medical), Arts (Pre-Science).

In 1943 other changes were initiated which transformed Loyola into the developed academic institution it is today. A distinct Faculty of Science was established, offering Honours Chemistry and Honours Mathematics courses, and since 1961 Honours Physics; the first three years of Engineering were introduced in Civil, Mechanical, Mining, Chemical, and Metallurgical Engineering; major fields in Economics, English and History were established in 1953 and in Theology in 1962.

Honours Courses in Economics, English and History were initiated in 1958 and in Theology in 1963. An Extension Department, since renamed the Evening Division, and a Summer School were founded in 1957 to fill the need of those unable to pursue their studies during the day and thus provide a public service.

The academic world soon recognized the new status of Loyola: the Chemical Institute of Canada

(CIC) approved the Honours Chemistry program as fulfilling all the requirements for professional standing in its Institute; the Engineering Institute of Canada (EIC) recognized the competence of Loyola Engineering Department; the Institute of Chartered Accountants of Quebec accepted the work done in the Commerce course, a major in Accounting, and granted the same privileges to Loyola graduates as were conferred on graduates of other older institutions; the Canadian Conference of Canadian Universities and Colleges accepted Loyola as an autonomous member. All faculties of the College have prepared students for and have sent them to the graduate schools of American, British and Canadian universities, which have conferred Engineering, Master's and Doctoral degrees on them.

The growth of Loyola has made noticeable changes; for example there are now four faculties and fifteen departments; the number of lay members of the staff has increased very greatly; and, there has been a very ambitious building program established to provide the necessary physical facilities.

The rising importance of the Extension Department and the Summer School necessitated a revaluation of the programme in the course of which the Extension Department was renamed Evening Division of Loyola College and became more closely integrated with the Day Division of the College. The Summer School has retained its basic structure, but day courses will be offered for the first time during the summer of 1964. Further information about the work of these two Divisions may be obtained from the Director of the Evening Division.

aim of Loyola College

The aim and purpose of Loyola College has been stated very well by John Henry Cardinal Newman in a Sermon preached in the University Church at Dublin entitled "Intellect, the Instrument of Religious Training" in which he states:

... I wish the intellect to range with the utmost freedom, and religion to enjoy an equal freedom; but what I am stipulating for is, that they should be found in one and the same place, (i.e., religion and science) and exemplified in the same persons... wish the same spots and the same individuals to be at once oracles of philosophy and shrines of devotion. It will not satisfy me, what satisfies so many, to have two independent systems, intellectual and religious, going at once, side by side, by a sort of division of labour, and only accidentally brought together. It will not satisfy me, if religion is here and science there, and young men converse with science all day, and lodge with religion in the evening. It is not touching the evil, to which these remarks have been directed, if young men eat, and drink and sleep in one place, and think in another; I want the same roof to contain both the intellectual and moral discipline. Devotion is not a sort of finish given to the sciences; nor is science a sort of feather in the cap, if I may so express myself, an ornament and set-off to devotion. I want the intellectual layman to be religious, and the devout ecclesiastic to be intellectual... Sanctity has its influence; intellect has its influence; the

influence of sanctity is the greater on the long run; the influence of intellect is greater at the moment. Therefore in the case of the young, whose education lasts a few years, where the intellect is, there is the influence. Their literary, their scientific teachers, really have the forming of them. . . . This is Loyola's reason for existence; this is Loyola's aim.

facilities

BUILDINGS Loyola College is located on a fifty-acre site in the west end of Montreal. The structures of the College are: the Refectory Building (built in 1916); the Administration Building (1927); the Stadium and Cafeteria (1923); the Chapel and Auditorium (1933); the Central Building (1947); the Student Residence (1960); the Drummond Science Building (1962); Hingston Hall (1963); a temporary student union building (remodelled in 1963); and the Georges P. Vanier Library (1964). The new Library Building provides additional study areas and improved library facilities; and the new Student Residence accommodates 300 students. In the near future, the recently remodelled Junior Building will become available for lecture rooms and offices.

LECTURE ROOMS The 25 lecture rooms have a total seating capacity of 1,600. The amphitheatre in the Drummond Science Building can seat 350 students; the auditorium has a seating capacity of 750.

LIBRARY The combined new library buildings permit book holdings up to 170,000 volumes

and study space for 520 students at a time.

LABORATORIES About 60,000 square feet of floor space is devoted to science laboratories, shops, and offices. In addition, there are five engineering laboratories, a fully-equipped language laboratory, and a computer room housing an IBM 1620 Data Processing System and associated equipment.

MAIN CHAPEL The College Chapel has a seating capacity of about 500.

RESIDENCE The new residence, Hingston Hall provides accommodation for 300 students.

STADIUM The stadium has a regulation-size artificial ice surface.

income and needs of the college

The endowment of Loyola College in buildings and educational equipment is in excess of ten million dollars. The Development Plan of Loyola College calls for a Student Union, an Engineering Building, a Faculty Residence, and an Athletic Centre. The present High School Building will be replaced by a building on another site.

THE CAPITAL DEVELOPMENT PROGRAMME Continual building needs call for continuing capital development support from individuals, business and industry throughout Canada. Current construction plans include added classroom and laboratory space, residence facilities, engineering building, athletic centre and Student Union.

THE FACULTY ENDOWMENT FUND The need to keep pace with the growing demands for increased faculty membership of the highest qualification can be met only if an endowment fund of substantial size is available to supplement current revenue and grant funds.

THE VANIER LIBRARY ENDOWMENT FUND Contributions provide for the growth of Library holdings and facilities at Loyola commensurate with student study and research needs.

SCHOLARSHIP AND BURSARY ENDOWMENT Loyola receives continuous requests from talented and worthy students for financial aid. Both Annual and Founded scholarships and bursaries are sought to meet this need.

THE INSURANCE ENDOWMENT FUND A relatively small Life Insurance premium payment each year out of current income can provide a gift to Loyola of substantial size. The death of the donor will not interrupt the completion of the gift, nor will the estate of the donor be diminished for the rest of the family.

THE ALUMNI ANNUAL FUND Annual giving by Alumni represents the largest single source of support to Universities and Colleges in North America. A regular yearly contribution to the Loyola Alumni Association supports a variety of aid programmes to Loyola College and her students. For full information and additional printed material please contact the Development Office.

services to students religious activities

In order to make concrete and personal the religious truths, which the students have studied in the Theology courses, Loyola College offers a program of religious activities calculated to nourish and deepen their personal and apostolic dedication.

DAILY MASS A special Student's Mass is offered daily, Monday to Friday, at 1.00 p.m. in the College Chapel. Two confessors are always available during the Mass.

SODALITY OF OUR LADY This organization was established by the Society of Jesus four centuries ago and commissioned by Pope Pius XII in 1948 to meet the needs of the Church by forming competent and dedicated lay leaders. The members undertake an intensive spiritual formation,

and dedicate themselves to assist the spiritual, intellectual and social progress of the College, and to promote work in the hospitals and among the poor and underprivileged of the City.

APOSTLESHIP OF PRAYER The Apostleship is an association with a two-fold aim: first, to instill into the students that apostolic spirit which, as public men, it is hoped they will later on exercise in the world, and secondly, to join in the great crusade of prayer for Christian unity.

ST. JOHN BERCHMANS SOCIETY This Society has as its aim the training and supplying of servers for the Masses and other liturgical functions which take place at the College. The Society is open to all students, resident and non-resident.

RELIGIOUS ORIENTATION DAY On Friday, September 18, a Religious Orientation Day will be held. The purpose of this day is to give students the opportunity to dedicate their academic year to God. In order to accommodate all students, the sacrifice of the Mass will be offered several times during the day, and confessors will be on duty all day. A series of orientation conferences will be given by a guest speaker.

WEEKEND RETREATS Four weekend retreats will be given for College students at the Manresa Retreat House, Beaconsfield. These retreats will begin on a Friday evening and end on Sunday afternoon. They will be given on the following weekends: Nov. 20-22; Feb. 19-21; Feb. 26-28; and March 5-7. A nominal fee is charged for room and board at the retreat house.

academic counselling

All aspects of Freshman orientation and Academic Counselling are under the direction of the Director of Freshman. The upper classman's academic work will be directed by the Head of the Department or Faculty in which he is registered.

To facilitate counselling and to bring the freshman students into contact with an individual faculty member to whom he may turn for advice and help, a committee of Faculty Advisers operates under the Director. Each Faculty member has from eight to ten students with whom he may become more closely associated than is possible in the lecture room, and whose academic work he reviews periodically with the student.

student counselling

Education is not merely the acquisition of facts, or skills, or even of insights. It is essentially a growth, a process which leads a person to spiritual, intellectual and social maturity.

This process, however, is not automatic. The student is ultimately responsible for the direction he gives his life. He must make his own decisions and solve his own problems. But he need not do so blindly nor without help.

In order to provide students with the opportunity of obtaining guidance and advice on a personal level, the Student Counsellor is always available for consultation. Students are invited to visit him in his office, either by appointment, or otherwise.

student activities

Student societies, committees and clubs, which number approximately sixty-five, combine to develop in the student body a sense of responsibility, a capacity for mature dialogue and government and a love for the school. These activities embrace all aspects of education: religious, political, managerial, social, recreational, athletic and cultural. All societies are initiated, developed and financed by the students themselves, through the medium of the Student Association and its governing body, the Student Administrative Council.

ELIGIBILITY Although all day students of Loyola College who are registered in three full courses or more and who have paid their student activity fee for the academic year are members of the Student Association, they are subject to the following eligibility rules in order that they may take part in society and committee activities: 1) they must have shown satisfactory conduct and application and must remain in good academic standing; 2) they must not be under censure at the time of their election or appointment.

SOCIAL AND CULTURAL The chief social events of the year take shape in the Freshman week, the Athletic and the Faculty dances, the Winter Carnival and the Awards Banquet. Literary endeavours find expression under the jurisdiction of the Board of Publications, a newly-formed body which owes its existence to an agreement signed last year by the Administration of the College and representatives from the Student Association. This agreement

consisted in the Administration relinquishing its previously-held Publisher's rights to the Board of Publications, thus transferring to the Board both the rights and responsibilities that control over all campus publications entails. Presently under the Board are six publications: **The Loyola News**, official student newspaper on campus; **the Amphora and Amalgam**, Loyola's literary endeavours; **the Handbook**; **the Student Directory** and **the Review**, the lasting souvenir of student's "college daze".

The cultural atmosphere is further complemented by such organizations as the Drama Society which produces classical, modern and original plays, the Band, Choral and Jazz Societies.

DISCIPLINE It is the constant purpose of the College to encourage the growth of personal and corporate responsibility consistent with the "Christian man". Serious breaches of the code that demands respect for order, morality, personal honour, and the rights of others will necessitate withdrawal from the College. This aspect of student education is the direct responsibility of the Dean of Men.

MEDICAL EXAMINATION Students entering Loyola College for the first time are strongly urged to have a medical examination before commencing their college life. Accident insurance may be obtained at the Bursar's office.

the military services

There are three military plans to qualify the undergraduate as an officer in the Canadian Forces:

Naval (UNTD), Army (COTC), and Airforce (URTP). To be eligible the undergraduate must be seventeen years or older, be medically fit and meet the enrolment standards. He must be a Canadian citizen or a British subject resident in Canada with the certificate of a landed immigrant.

U.N.T.D. The University Naval Training Division is a plan whereby suitable undergraduates are given three years training leading to a commission in the R.C.N. Reserve. Loyola cadets undergo winter training one evening a week at H.M.C.S. Donnacona, 2055 Drummond St., Montreal, and are sent to either the Atlantic or Pacific coast during the summer months. They are given training in such subjects as navigation, communications and seamanship, including a period of approximately four weeks sea training in an operational ship. On these courses they visit various ports of call in the Western Hemisphere.

Probationary Cadets are selected early in October of each year and appear before a selection board in January to become confirmed as cadets in the R.C.N. Reserve.

LOYOLA COLLEGE CONTINGENT C.O.T.C. The purpose of the Loyola College Contingent, Canadian Officers' Training Corps (COTC) Program is to provide a means whereby Loyola undergraduates can qualify for appointment as commissioned officers in the Canadian Army. Through the Canadian Officers' Training Corps the student can develop leadership, gain useful technical knowledge and qualify for the prestige of the Queen's Commission with the advantages of some earnings during the aca-

demical year and full time summer employment at good rates (\$235.00 a month and transportation, uniforms, food, accommodation and medical care).

The training program covers a minimum of two and a maximum of three years. Each training year has two parts; a theoretical phase of approximately 64 one hour periods, which is taken at the Loyola C.O.T.C. Mess during the academic year, and a practical phase consisting of a minimum of 12 weeks to a maximum of 22 weeks of instruction each summer. The practical training is normally taken at a corps school or a unit of the Regular Army. The third and final practical phase is normally taken with a Regular Army unit, where the theory and practical training given previously is put to the test, and the talents of the young officer are developed. The young officer may be selected for training with the Canadian Forces in Europe.

Applications for enrolment in the Loyola College Contingent, C.O.T.C. are accepted up to January 15th of each year. Accepted students are enrolled as Officer Cadets and retain this status for the first two years.

Members of the C.O.T.C. who complete the first two theoretical and practical phases of training and intend to continue their college courses, will be commissioned in the rank of 2nd Lieutenant. On completion of the third phase of theoretical and practical training and attainment of the required educational standards, they are eligible for immediate appointment to the Regular Army or Militia in the rank of lieutenant and are qualified to the rank of Captain in the Militia.

Capt. Kevin G. Troughton, Resident Staff Officer, Loyola Colle-

ge representing the Regular Army on the Campus may be consulted at the C.O.T.C. quarters in the Stadium Building.

U.R.T.P. Successful candidates in the University Reserve Training Plan (RCAF), are enrolled in the Primary Reserve in the rank of Flight Cadet.

For Flight Cadets, each year is divided into two training periods:

1 Winter Training: This takes place at McGill University, 475 Pine Ave. W. The Winter Training syllabus provides for 64 hours of lectures and parades during each academic year. The training is designed to familiarize U.R.T.P. personnel with the duties and responsibilities of junior officers and to give a general knowledge of the R.C.A.F., its functions and its role in defence. The syllabus includes lectures in world affairs, geopolitics, air power, civil defence and military history.

2 Summer Training: This is carried out at R.C.A.F. Stations. A maximum of 22 weeks of R.C.A.F. training and employment terminating on or before September 15th is offered. All successful candidates for the U.R.T.P. attend officers' school in the first half of the first summer. Those who are enrolled in a branch for which a course is conducted then proceed on formal course training while the remainder receive supervised employment at Stations across Canada. Formal courses may be of one, two, or three summers' duration at an overseas unit, depending on the branch of training.

Information covering U.R.T.P. may be had by contacting F/L J.C. Sloan at VI. 4-1932 or at 475 Pine Ave., W.

REGULAR OFFICER TRAINING PLAN (R.O.T.P.) The Armed Forces of Canada subsidize a limited number of under-graduate college students who are willing to accept a military service obligation as a commissioned officer under the provisions of the Regular Officer Training Plan.

College students found acceptable will be enrolled in the service of their choice (Royal Canadian Navy, Canadian Army (Regular), or Royal Canadian Air Force) as an Officer Cadet on a career basis. Upon achievement of degree status and fulfillment of military training requirements, Officer Cadets are promoted to commissioned rank and are required to serve a minimum of three years immediately thereafter in the service which sponsored their training. After such service, an officer may be released at his own request providing a period of national emergency does not exist.

A student may be qualified for subsidization under this Plan if: a) he is a Canadian citizen or British subject resident in Canada with the status of a landed immigrant; b) he has attained his 16th but not his 20th birthday on the 1st of January of the year of enrolment in College; c) he is physically fit for enrolment in the branch and service of his choice; d) he is single and intends to remain so during his Officer Cadet training period.

Successful applicants will receive financial assistance as follows: pay - \$73.00 per month; living allowance - \$65.00 per month; holidays up to thirty days annually with full pay and allowances. Tuition and other essential college fees are provided by the Department of National Defence. Text-book and instrument grant are \$75.00 per year. Medical

and Dental care expenses, uniforms and accoutrements are provided by the Department of National Defence. Aircrew Trainees receive \$75.00 per month flying pay while undergoing summer training.

As an Officer Cadet, each student will undertake a) continuation of a normal academic workload and maintenance of a satisfactory standing therein; b) military training, which is divided into two phases, theoretical and practical, taken during the student's first, second, third and fourth year as an R.O.T.P. Cadet.

1 The Theoretical Phase consists of academic military studies presented as lectures, lecture demonstrations and discussions on subjects that will provide a background for the practical phase.

2 The Practical Phase is full time duty with the Regular Forces taken during the summer vacation.

Students interested in the R.O.T.P. may obtain further information and application instructions from Capt. Kevin G. Troughton, R.S.O., Loyola College, C.O.T.C.

Loyola alumni association

The Loyola Alumni Association has as its object to advance the interest and to promote the welfare of Loyola College and of the Association and its members. A General Meeting is held every year, generally at the College. At this meeting officers for the coming year are elected and all matters of general business transacted.

The Loyola Alumni Association sponsors the Loyola Alumni Student Loan Fund, the Post-Graduate Bursary, and the Under-Graduate Bursary.

The office of the permanent Secretary is located at Loyola College.

placement office

The Office is operated by the University Section of the National Employment Service and is under

the direction of a full-time Placement Officer. The recruiting of university seniors is a continuous process which starts early in the academic year. Most of the major national employers are active in this recruiting and many of the larger firms send recruiting teams to interview on campus.

Although the major emphasis of the NES Student Placement Service is on the placement of graduating students in permanent employment, assistance is also given to students in finding summer and part-time jobs.

A selection of literature on careers and companies is available to students.

students extracurricular activities

LOYOLA COLLEGE ATHLETIC ASSOCIATION The Loyola College Athletic Association was formed to aid the Director of Athletics in the promotion and supervision of all athletics in the College and to create and foster a proper college spirit among the students. An Athletic Board of Control, composed of Faculty Members, Alumni and Students, guide the policy and overall direction of the Athletic Program.

The College is a member of the Ottawa - St. Lawrence Inter-collegiate Athletic Association and competes with other colleges in the following activities: Football, Soccer, Hockey, Basketball, Tennis, Golf, Skiing, Swimming, Curling and Sailing.

A regular program of Intramural Athletic Activities is conducted during the year. The aim of this program is to offer athletic competition to those students who do not compete on the intercolle-

gate level. A total of twelve sports comprise this program.

No student may participate with an outside organization in any athletic activity without the written permission of the L.C.A.C.

faculty societies

ARTS SOCIETY The Arts Society is one of the older societies on campus, and as might be expected, has had a varied and lively career. It was formed primarily to establish unity and co-ordination among the members of the Faculty of Arts as well as to initiate and sponsor non-academic activities for the students of the society. In the past year, the Arts Society has presented such projects as a "Meet-the-Professors Night"; a "Careers Night", comprising a discussion on graduate studies and how to finance them; a series of ski-trips, tours and movies; a debate, involving both faculty and students; and a closing banquet. Plans for next year include a number of guest lectures and a society publication.

BIOLOGICAL SOCIETY The Biological Society (formerly the Pre-medical and Pre-dental Society) presents a program of academic, social and cultural interests. Included in its activities are visiting lecturers, medical and biological films, social evenings, and a banquet at the end of the academic year.

CHEMICAL INSTITUTE OF CANADA The Chemical Institute of Canada is the national body representing chemists and chemical engineers. The student chapter at Loyola provides the breadth of outlook and the opportunity for professional association need-

ed by all who plan to fashion a career in chemistry.

The Loyola Chapter, incorporating students from Marianopolis College, and now in its seventh year of operation, offers a broad programme of activities. For only \$2.00 per year, the Institute offers a monthly magazine, opportunities to attend the monthly meetings of the Montreal Chapter and hear leading chemists discuss their work, an employment service open to all members through the Head Office, and a variety of tours and social events. The Institute has student chapters in universities across Canada with over 2000 members. It is open to all students in major or honours chemistry, biochemistry and chemical engineering.

COMMERCE SOCIETY The Loyola Commerce Society, two years younger than the faculty it represents, has from its inception been one of the liveliest societies on campus. In the past the society has sponsored tours of business, the annual Red Cross Blood Drive, a "Careers Night," a "Meet-the-Professors Night", an Awards Banquet and Commerce Breakfasts. The society also sponsors "The Work Sheet", which is its own official publication.

The Investment Club is an organization of special interest within the Commerce Society, though it is open to all who wish to play the stock market. Each member is theoretically given \$10,000 at the beginning of the year, which he is supposed to invest. A nominal fee is charged for brokerage and all transactions are carried out with reference to the listings in the daily newspapers. Prizes are awarded at the end of each year for those who have earned the most money.

The purpose of the Club is to give members some indication of the fluctuations, risks, and fortunes of the stock market without involving them in actual losses.

ENGINEERING INSTITUTE OF CANADA The Engineering Institute of Canada's Loyola Chapter, now entering its fourth year, boasts over 100 members who enjoy, for \$2.00 a year, a monthly magazine, tours, talks, and banquets, all related to engineering. The Institute is a professional organization to which many Canadian engineers belong. Members can be recognized by their distinctive "slide-rule" tie-bars.

LOYOLA ENGINEERING HONOUR SOCIETY This society exists to give formal recognition to students whose academic performance has been outstanding and will invite students to join who have achieved high standing in the final examinations of the previous April. The members seek to promote academic spirit in the student body of the Faculty and to assist everyone in it to achieve and surpass his personal goals.

SOCIETY FOR THE ADVANCEMENT OF MANAGEMENT (SAM) is an international organization of business men with student chapters at many institutions of higher learning. The Society, in this College, has a strong following among the Commerce students and has achieved some remarkable successes in its programming since it came here six years ago. The Society publishes a magazine, and the student chapter organizes tours of various business establishments, as well as bringing noted men of the business world to the College to address students.

SCIENCE STUDENTS ASSOCIATION The SSA, youngest of the three major faculty associations, presents a varied program of events with a scientific bias, the most important being tours of various plants, regular showings of scientific films, and the annual Science Banquet, held in March.

"Eureka" is the official paper of the Association. It is also hoped that greater liaison with the CIC and EIC chapters and the Biological Society will produce other projects of interest to all science students. Science pins are on sale throughout the year at \$1.00 each.

fees

scholastic year — 1964-1965

regulations regarding payment of tuition and fees

Tuition and Fees must be paid at the time of registration. However, a student may, in special cases of hardship and with the consent of the Bursar, pay Tuition and Fees in two installments, the first at registration and the second on January 15th following. In such cases an installment fee of \$10.00 will be charged.

Evidence of Loyola Scholarship Awards or Loyola Bursaries must be submitted at time of registration; otherwise fees must be settled in accordance with the above. Students who have applied for Government Bursaries must still settle their fees at registration in accordance with the above.

Students will not be considered registered and may not attend classes until the required fees have been paid or arrangements for payment made with the Bursar. Failure to make payments of tuition, fees or other amounts owed the College when due, or to arrange for such payments before their delinquent dates, is sufficient cause to bar the student from classes or examinations and to withhold diploma, scholastic certificate or transcript of record until the debt has been adjusted with the Bursar's Office.

Any damage done to any property of the College will be charged to the offender's account.

Drafts, cheques, money orders, etc., should be made payable at par to "Loyola College" and addressed to the Bursar, Loyola College, 7141 Sherbrooke Street West, Montreal 28, Quebec.

All accounts are subject to revision for adjustment of errors. The College also reserves the right to make changes without notice in the published scale of fees.

general fees — tuition

■ ARTS (General Course)			
All years	\$245.00 per half year	\$490.00 per year	
■ ARTS (with pre-Medical subjects)			
Freshman and			
Sophomore	\$245.00 per half year	\$490.00 per year	
Junior and Senior	\$255.00 per half year	\$510.00 per year	
■ SCIENCE			
All years	\$255.00 per half year	\$510.00 per year	
■ ENGINEERING			
All years	\$265.00 per half year	\$530.00 per year	
■ COMMERCE			
All years	\$245.00 per half year	\$490.00 per year	

student activity

Student Administrative Council	\$17.00
Student Centre Building Fee	2.50
Loyola College Athletic Association	13.00
Total (payable at registration)	\$32.00

special fees

PAYABLE AT REGISTRATION

Tuition, extra subjects (in addition to regular program)	\$100.00
Registration Fee (payable on first entrance only)	5.00
Late Registration Fee— for first day	10.00
— each succeeding day	3.00
Library Fee	5.00
Laboratory Fee (non-returnable) Acts (pre-medical)	
Sophomore, Junior and senior	
Science and Engineering - All years	15.00

payable january 15th following registration if fees paid in two installments

Graduation Fee — All Years	20.00
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payable on date of each application

Engineering Elementary Survey School, Course Fee	60.00
Supplemental examination, each	7.00
Special examinations	15.00
Transcripts (Full)	1.00
Transcripts (Partial)	.50
Parking Permit	10.00
Local examination privileges, each examination	15.00

withdrawals and adjustments

Any student who is forced to withdraw from a course or from the College is required to notify the Registrar in person or in writing.

If, after paying the fees, a student finds it impossible to continue at College, a refund of tuition fees only will be made on the following basis: Students withdrawing will be charged one seventh of the total tuition for each month of attendance; students withdrawing at the beginning of a month or at any time within a month are charged for that whole month.

residence

Hingston Hall, completed in 1963 and located on campus, is a modern edifice providing room and board for 306 students. This residence has two, four floor wings, centered by the main entrance and the common lounge. Student recreational facilities, study rooms, offices and chapel are located on the ground floor. Meals are served in an attractive refectory, cafeteria style. The aim of Hingston Residence is to promote spiritual, athletic, social and cultural ideals moulded into an ideal student educational atmosphere. To serve this end, academic and spiritual counsellors as well as proctors are available for student guidance. Hingston Hall has 132 single rooms and 84 double rooms available. Room facilities include bed linen and blankets.

All Freshmen coming from outside the Montreal area will be obliged to live in Residence.

Parking facilities for resident students are the same as for other students on the campus. Parking permits may be obtained for a fee of \$10.00. Residence fees (exclusive of the Christmas holidays) are as follows:

Double Room	\$690.00
Single Room	730.00
Refundable Key Deposit	5.00
Refundable Damage Fund Deposit	10.00
Non-refundable residence activity fee	5.00
Room deposit which must accompany each application	50.00

This deposit will be deducted from the payment due on entrance. The money will be refunded if the student is not accepted or if the applicant cancels the room reservation by September 1, prior to registration.

Residence fees, paid in full, on or before September 1, will be subject to a discount of \$10.00.

No student will be permitted into residence before settlement of the account has been made in accordance with the above regulations.

The College reserves the right to make changes without notice in the published scale of fees, if, in the opinion of the College, circumstances so require.

Application for residence should be made to the Manager of Hingston Hall, Loyola College, 7141 Sherbrooke Street West, Montreal 28, Quebec. Application forms and further information may be obtained by writing to the above.

To ensure favourable consideration of your application, it is recommended that applications be submitted prior to August 15.

The College reserves the right to place the student in whatever room seems to be best in the interests of the men's programme as a whole, but careful consideration will be given to preferences expressed.

If a student withdraws from residence, a pro-rated refund less ten per cent will be made on room and board.

All residence fees are payable in Canadian funds, and cheques will be made payable to Loyola College.

Residents are required to vacate their rooms within 24 hours of the last examination or graduation.

admissions

Admission to first year is granted to students with Junior Matriculation.

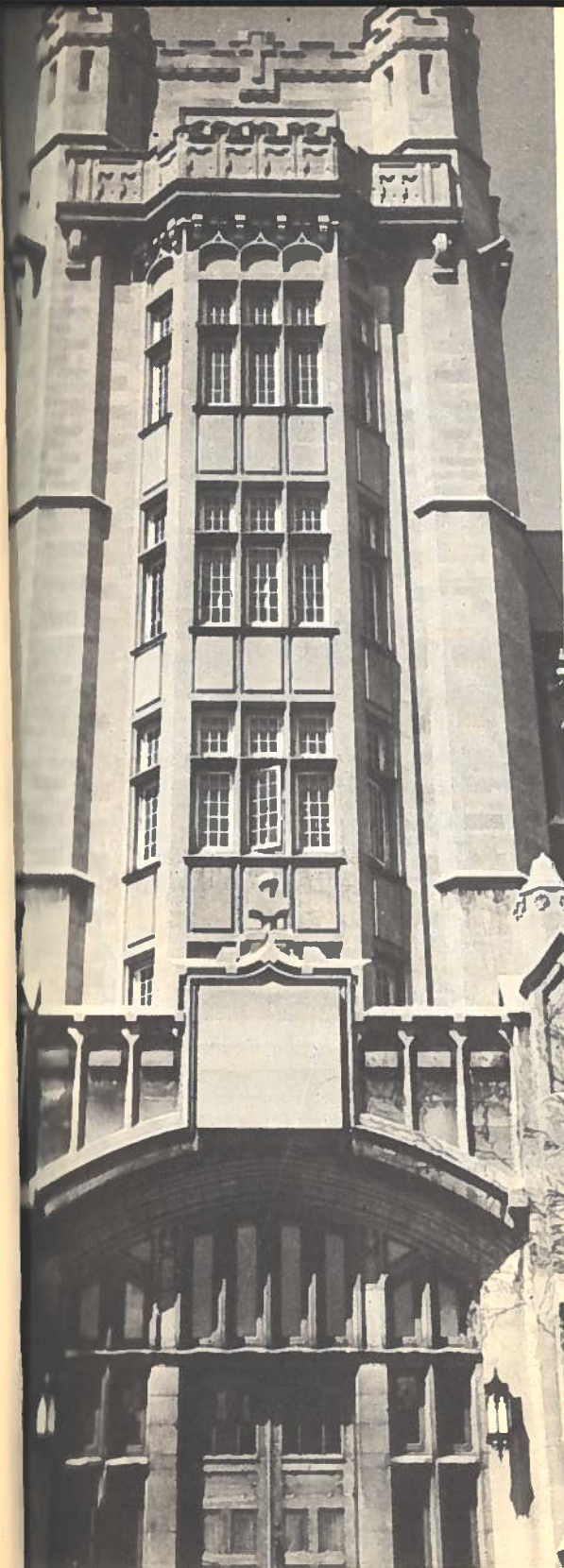
Admission to second year is granted to students with Senior Matriculation.

Admission to second and third years is granted to transfer students.

Admission is granted on the basis of ability, achievement and promise as evidenced by:

- 1 Principal's Letter of Recommendation.
- 2 Official Academic Records.
- 3 Results of Aptitude and Attainment Tests, when available.
- 4 Recommendation by the Admissions Committee, after interview if required.

Sometimes the Committee will recommend the admission of a mature student, over 21 years of age, whose secondary education has been interrupted by causes beyond his control. Sometimes it will recommend conditional admission, with probationary requirements. Any student who fails to satisfy his probationary requirement must withdraw and will not be considered for re-admission.



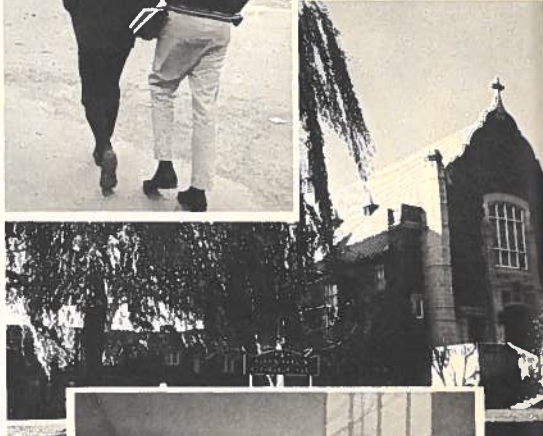
a
picture
tour
of
Loyola



THE QUAD



THE CHAPEL EXT

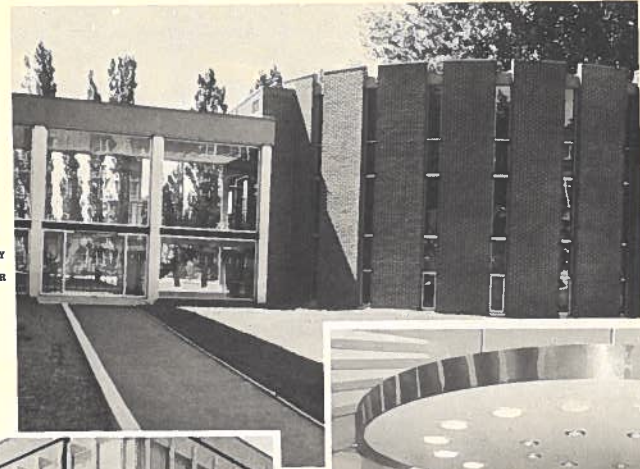


LOOKING FROM NEW
TO OLD



THE CHAPEL INTERIOR

the
old...



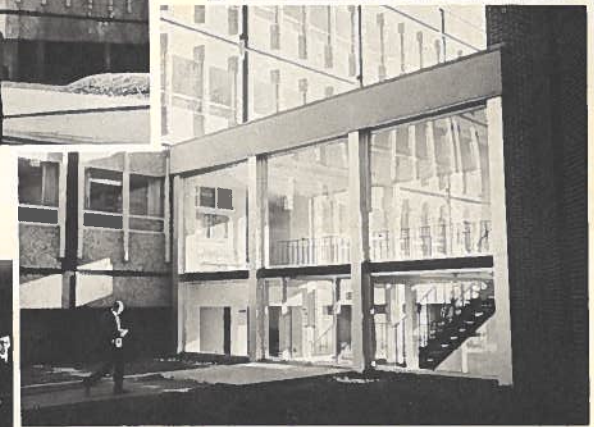
SCIENCE LIBRARY
EXTERIOR



INNER BUILDING



SCIENCE LIBRARY
INTERIOR



INTERIOR AND EXTERIOR OF JOINING STAIRCASE



and
the
new

interiors



STUDENTS IN MAIN AUDITORIUM



SCIENCE LIBRARY



RESIDENCE CAFETERIA



MAIN AUDITORIUM



CLASS IN SESSION MAIN AUDITORIUM



PHYSICS CLASS IN SESSION



PROFESSORS LOUNGE

drama sports C.O.T.C.



DRAMA WORKSHOP

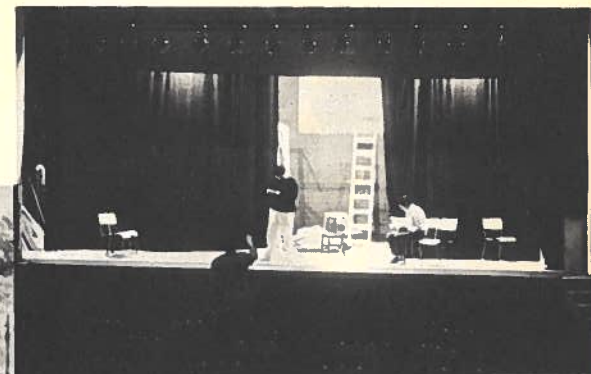


FOOTBALL LINEUP



STADIUM INTERIOR

STADIUM GUARD



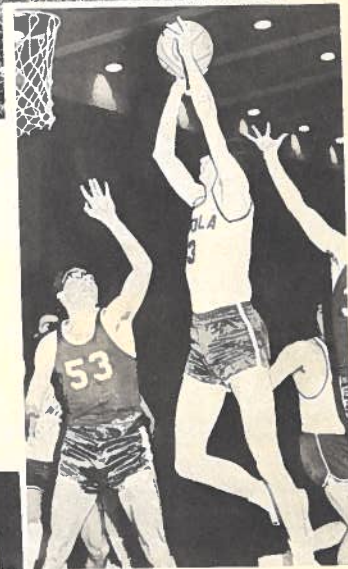
DRAMA WORKSHOP



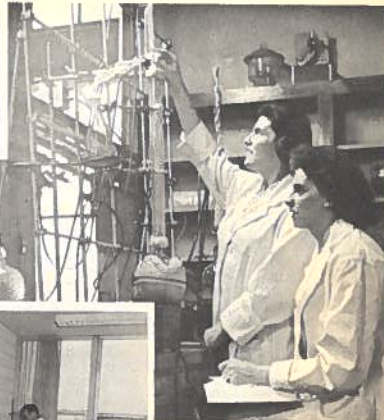
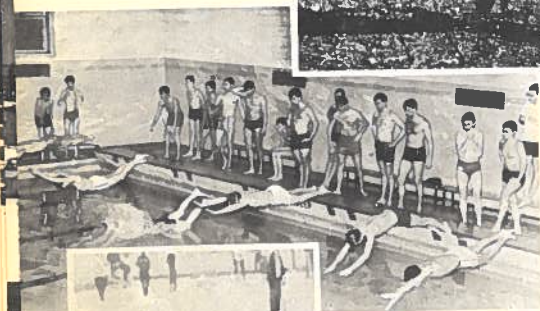
FOOTBALL LINEUP



STADIUM INTERIOR



HOCKEY
SOCCER
SWIMMING
BASKETBALL
AND
CURLING



research



LANGUAGE LAB



DEBATING



CAMPUS STREET

(Note: All documents submitted become the property of the College if the applicant is accepted.)

ADMISSION TO FIRST YEAR In Canada, Junior Matriculation standing, with college entrance attainment, indicates ability, achievement and promise sufficient for admission into first year: specifically, The Catholic High School Leaving Certificate, Department of Education, Province of Quebec (11 papers), and The High School Leaving Certificate, Department of Education, Province of Quebec (10 papers), with 50 per cent in each paper and an average of 65 per cent for general studies, but 70 per cent for Honours studies and the Engineering programme. Consult individual study programmes for subjects required. English Literature, English Composition, Elementary Algebra and Elementary Geometry are always required. Some equivalents of the above are: in the United States, Grade XII certificate with the college recommending mark as announced by the particular High School; in Great Britain, the General Certificate of Education, if it indicates satisfactory completion of five subjects at the ordinary level (including English, another language, and Mathematics); in Latin America, a certificate showing satisfactory completion of courses necessary for admission to university in the applicant's own country.

ADMISSION TO SECOND YEAR In Canada, Senior Matriculation or its equivalent is sufficient for admission to second year if it is attained with 50 per cent in each paper and an average of 60 per cent.

Applicants for admission to the second year of Engineering should consult the Engineering Section of the Calendar.

The General Certificate of Education, if two of its five subjects are at the Advanced Level, and all subjects are appropriate to the programme desired, will admit an applicant to second year.

TRANSFER STUDENTS A transfer student is a student applying for admission to advanced standing with credit given for work done at another college or university.

No student who is ineligible to re-register at his previous college or university will be admitted to this college.

No transfer student may be admitted directly into fourth year. Two full years of residence are required.

Transfer students must present to the Registrar by July 15th an official certificate of standing (normally not less than 60 per cent average) and a statement of honourable dismissal.

Applications for admission should be addressed to the Registrar, Loyola College, 7141 Sherbrooke Street West, Montreal 28, not later than July 15th.

REGISTRATION Registration takes place on the days and times assigned. These are given in the Academic Calendar at the beginning of this book. A late Registration fee is charged for registering later than the time assigned — \$10.00 for the first day and \$3.00 for each succeeding day.

Every student registers in the Department designated by the name of his Continuation Subject.

academic regulations

classification of students

- a) A full-time student is one who is registered in four or more full undergraduate courses.
- b) A part-time student is one who is registered in less than four full courses.
- c) A special student is one who is not proceeding to a degree or certificate.
- d) A student on probation is one who is placed on probation by the Committee on Admission or by the Committee on Academic Standing. In case of failure such students will not be permitted to repeat their year but will be required to withdraw.

RESIDENCE REQUIREMENTS AND LENGTH OF PROGRAMME OF STUDIES The number of years of attendance required for the attainment of any degree or certificate is as indicated in each programme. This time may be reduced at the discretion of the Committee on Admissions through the transfer of credit from another university. In all cases, attendance at classes for at least two academic years shall be required.

A candidate may be excused attendance for not more than one full academic year or the equivalent through the transfer of credit obtained by attendance at or by Correspondence Courses from another approved university. A student may take courses for credit in Summer Schools conducted by this or other institutions, subject to the prior approval of the Head of the Department which gives the course and the Head of the Department in which he is registered. Such courses, if approved, may be counted towards degrees. Normally, students who enter with Junior Matriculation standing, will require four complete academic years to obtain a Bachelor's degree.

course load

The normal course load for each year is indicated in the programme for each degree.

Normally a student will be allowed to take only one course in excess of the normal load. The Committee on Academic Standing may, in exceptional cases, allow a student to take two courses in excess, but only if the student has obtained better than average standing in the previous academic session. The year's average will be determined from all courses for which he is registered.

Under certain conditions, a student may be allowed to transfer from one course to another in any year. He must obtain the approval of his Major department. The appropriate instructors should be informed, and a special form should be filled out and given to the Registrar. The last day on which a transfer may be effected is shown in the Academic Calendar.

classification of courses and grades

- a) Courses are referred to as: Half-Courses, in which the subject matter is normally completed in one semester; and Year Courses or Full Courses, in which the subject matter is normally completed in one year.
- b) The grading is as follows:
 - 80 - 100 Grade "A" or First Class Honours.
 - 65 - 79 Grade "B" or Second Class Honours.
 - 60 - 64 Grade "C" or Third Class Honours.
 - 50 - 59 Grade "D"
 - 35 - 49 Grade "Fx" — Failure, with supplementary examination privileges in certain cases.
 - 0 - 34 Grade "F" — Failure, with no supplementary examination privileges.
- c) The Bachelor's Degree is granted according to these traditional categories:

Cum laude	to students with a four year average of between 70% and 79%.
Magna cum laude	to students with a four year average of between 80% and 89%.
Summa cum laude	to students with a four year average of 90% or over.

attendance regulations

A student is expected to attend all lectures, discussion groups, seminars and laboratory periods of any course in which he is registered.

A student who has been absent from more than 20% of the lecture and/or laboratory periods in a course which he has failed will not be allowed to write a supplemental examination in that course. The course must be repeated, or, if an elective, an equivalent course taken.

examinations

- a) Regular examinations:

Final examinations in first semester courses are written at the beginning of January; final examinations in all other course are written in April and May.

- b) Mid-Year Tests:

Tests are conducted in Freshman courses, on assigned dates before the Christmas vacation. One-hour tests in regular class periods may be held by any Instructor whenever he thinks advisable.

- c) Supplemental examinations:

A supplemental examination is one set in a subject in which a student (who has failed his year) has failed to obtain standing at the regular examination, but who has obtained a minimum of 35%.

All supplementals in Year Courses and in second semester courses are held in late August. Supplementals for first semester courses however, for Seniors, are held in May. Applications to write August supplemental examinations must be sent to the Registrar before July 15th.

If a student has written and failed the first regular examination in a subject and is eligible to write a supplemental, he must do so the first time this supplemental is scheduled. If he fails to write it at this time, or if he writes and again fails it,

he must repeat the course, or an equivalent, if an elective, before re-examination is allowed.

If a student is unable to write the supplemental examination here, he may be granted local privileges upon the payment of the required fee. The student must secure, as presiding official, a qualified member of an educational institution. The student must pay that institution the fee it charges for its services.

For those requesting local privileges, the name, address and consent of the presiding must be in the Registrar's Office by July 15th, otherwise the student must write at this College.

d) Special examination and aegrotat standing.

A special examination is an examination other than the regular or supplemental examination, permitted by the Committee on Academic Standing for a grave reason and after special application. No special examination or aegrotat standing will be allowed except on the recommendation of the Chairman of the Department concerned, after consultation with the instructor involved.

A student who, because of illness, has failed to write the final examinations in January, or the final examinations in April and May, in any courses, may apply for aegrotat standing or for permission to write a special examination, provided he presents a medical certificate to the Registrar.

Reasons other than medical must also be fully documented for consideration by the Committee on Academic Standing.

These documents must be submitted in writing to the Registrar not later than one week after the date in which the examination was held.

Special examinations normally will be written at the time of the supplemental examinations.

e) Examination Regulations:

A candidate may be permitted to the examination hall later than thirty minutes after the beginning of an examination, and he may not leave within thirty minutes after the distribution of examination papers.

No articles such as textbooks, notes, books of tables, data sheets, paper, written material, hand-bags, etc., may be taken into the examination hall unless authorized by special instructions. No papers may be taken from the examination hall.

A candidate may not communicate with another candidate; he may not copy from another nor allow another to copy from him.

A violation of these rules may lead to the cancellation of the candidate's examination paper and even to his expulsion from the College.

determination of standing

term work

In all subjects, the ratio of term-work to examination mark is determined by the Department concerned. In general, the final examination will not count for less than 50%.

An instructor, with the approval of the Dean and the Chairman of the Department concerned, may require that essays, term papers, etc., be completed satisfactorily and in due time before a student will be granted permission to write the final examination. If the conditions are not filled, the student will be debarred from writing the final examination.

requirements for promotion

a) A student is eligible for promotion if:

- i) he has obtained the required pass average; and if
- ii) he has not failed in more than two full courses.

b) If a student has failed to obtain the required pass average he may be permitted to repeat.

c) If a student has obtained the pass average but has failed in more than two courses, he may be permitted to repeat.

d) A student who has failed a course, or courses (with a minimum of 35%) but who is not obliged to repeat the year's work must write supplemental examinations.

e) Normally a student will be allowed to carry only one condition (a full course failed) into the following year. The Committee on Academic Standing may make exceptions.

f) A student must obtain complete standing in his First Year before he may register for the Third Year; and in his Second Year, before he may register for the Fourth Year.

g) Normally a student must have completed standing in Third Year before he may register for Fourth Year. The Committee on Academic Standing may make exceptions.

transfer students

The promotion of students who transfer to another Faculty or programme of studies will be decided upon by the Dean and the Chairman of the Department to which he is transferring.

failures, repetition and withdrawals

failures

A student fails his year if he has not obtained a passing average; or if, with a passing average, he has failed more than two full courses.

Subjects which depend directly upon the work of a preceding year may not be taken by a student who has failed in the

work of the preceding year. A student who fails to pass a supplemental examination will not be eligible for re-examination without a further year's attendance in the course in which he has failed.

repetition

A repeating student is one who has failed the previous year here or at any other recognized university, regardless of whether he is registered in the same or a different faculty. Students may be permitted to repeat a year, subject to the approval of the Committee on Admissions. Students seeking this permission must apply in writing to the Registrar's Office before July 15th.

A student may repeat a course only once, except with permission of the Committee on Academic Standing. However, he may be granted credit in a course in which he has obtained 65% or more. He may not take courses which are scheduled in advance of the year he is repeating.

Repeating students in the First Year who do unsatisfactory work on the Christmas examinations shall be required to withdraw, subject to an appeal to the Committee on Academic Standing, which appeal should be submitted in writing and sent to the Office of the Dean of Studies within one week after the publication of the results. Unsatisfactory work is defined as having an average below 50%.

withdrawals

- a) A student who is repeating a year and fails to obtain a pass average in the final examination must withdraw.
- b) A student who is repeating First Year and fails to obtain 50% in the Christmas tests must withdraw.
- c) A student who is on probation and fails to obtain a pass average in the final examinations must withdraw.
- d) A full-time student who fails his year and who has already failed twice (either here or elsewhere) must withdraw.
- e) A student who in his First Year fails to reach a minimum standard in the Christmas tests must withdraw. The minimum standard is defined as an average of 30%.

rereading

While all papers in failed subject are reread before the grades are submitted to the Registrar's Office, and care is taken to record marks accurately, a student who considers that some factor affecting the final mark on the examination was not considered by the examiner, may appeal to have the paper reviewed. This request should be submitted in writing to the Registrar within two weeks of the official publication of student grades, together with a fee of \$10.00.

reports

Reports of final examination results of all students are sent to their homes. A mid-year report is also sent to the homes of First Year students.

scholarships, bursaries and awards

scholarships

A Scholarship is an award granted annually to a student for academic excellence, and which may be renewed if the student maintains an above-average (70% overall average) academic standing. The fact that the student has been awarded a scholarship will be duly confirmed by a parchment stating these facts.

The students will not receive cash unless otherwise stated, but their tuition fees will be fully or partly paid by the scholarships and only the remainder by the students themselves, depending on the value of the scholarships awarded.

The value of Endowed Scholarships may fluctuate depending on the current interest rates. The figures given are based on a five per cent (5%) interest rate.

Thirty entrance scholarships will be awarded by the Scholarship Committee on the basis of

- i) principal's recommendations, and
- ii) the student's academic record (ordinarily grade 11 or 12 marks).

Apart from this, candidates for scholarships must have completed at least one year at Loyola College.

No student will be considered eligible for a scholarship who has failed any year in his college or university education. Consideration will, however, be given to the student who has obtained more than a 70% average in each of the two years following the year repeated, e.g., a student who fails in Freshman may be eligible only in his Senior year; a student who fails in Sophomore, Junior, or Senior will not be eligible.

No student with supplemental examinations will be eligible for a scholarship, or if he already holds a scholarship, for its renewal.

For renewal of a scholarship, the student holding the scholarship must obtain an overall average of 70% or more for the current academic year, and must have passed all his final examinations in the courses in which he is registered.

No student may hold more than one scholarship from the College at any one time.

By Closed scholarship is meant that the scholarship is at present held by a student and is renewable.

By Open scholarship is meant that the scholarship is available to the student who has obtained the highest academic standard in the Year and Faculty specified below, and who does not already hold another scholarship. In case of ineligibility the student with the next highest standing is eligible.

A. endowed scholarships

THE LILLY F. BARRY SCHOLARSHIP

1 Value: \$400 Open. — 2 Value: \$400 Closed. — 3 Value: \$350 Closed.

THE URSULA CARLING SCHOLARSHIPS These are an endowment from the estate of the late Mrs. Ursula Carling.

1 Value: \$250 Closed. — 2 Value: \$250 Closed.

THE CLORAN MEMORIAL SCHOLARSHIP — Value: \$80 Open.

THE COLLINS-HEFFERNAN SCHOLARSHIP Funds from the Mary Ellen Heffernan Bursary, and from the Nulsen Collins Scholarship.

Value: \$200 Open.

Conditions: Open to students entering Fourth Arts.

THE CUDDY-STANFORD MEMORIAL SCHOLARSHIP Funds from the John M. Cuddy Scholarship, and from the Stanford Memorial Scholarship.

Value: \$200 Open.

Conditions: Open to students entering Third Commerce.

THE DOWLING-MORIARTY SCHOLARSHIP Funds received from the estates of the late Francis J. Dowling, and of the late Mrs. E. Stowell, widow of John Moriarty.

Value: \$200 Open.

Conditions: Open to students entering Fourth Engineering.

THE MRS. F.J. DUCKETT SCHOLARSHIP From the estate of the late Mrs. F.J. Duckett. — Value: \$200 Open.

THE FRIENDS OF LOYOLA SCHOLARSHIP From the funds endowed for the James Corcoran Scholarship, the Rev. William Doherty Scholarship, the Dollard Scholarship, and the Gregory O'Bryan Scholarship, and from funds given by the Students' Penny Scholarship. — Value: \$200 Open.

THE ARTHUR HALLEY MEMORIAL SCHOLARSHIP Endowment from P.F. Halley of St. John's, Newfoundland, in memory of his son, Arthur, a graduate of the Pre-Medical class of 1946, magna cum laude, who died on the eve of Convocation.

Value: \$100 Open.

Conditions: Open to students entering Fourth Arts (Bio-Chem.) or Fourth Science (Bio-Chem.).

THE LOYOLA SODALITY SCHOLARSHIP Funds from the Sodality Scholarship and from the Loyola Scholarship Club Association Bursary.

Value: \$200 Closed.

THE MAHONEY-MURPHY MEMORIAL SCHOLARSHIP Originally established as the Mother-Ellen Memorial Scholarship, and as the John Walsh Murphy Memorial Scholarship. — Value: \$200 Open.

THE KENNETH J. McARDLE MEMORIAL SCHOLARSHIP Donated by Mrs. Mary McArdle as a tribute to the memory of her late husband Kenneth J. McArdle.

Value: \$125 Open.

Conditions: Open to students entering Second Science (Honours Mathematics or Major Mathematics).

THE ST. IGNATIUS PARISH SCHOLARSHIP Money collected and presented by the St. Ignatius Men's Association and originally known as the Coronation Arts Course Scholarship.

Value: \$100 Closed.

THE SHARP-O'REILLY MEMORIAL SCHOLARSHIP Funds from the Alice M. Sharp scholarship, and from the Winnifred O'Reilly Memorial Bursary.

Value: \$200 Open.

B. gifts by the college

LOYOLA COLLEGE SCHOLARSHIPS:

First Year

Arts. Number: Seven. Value: \$490. Open.

Commerce. Number: Five. Value: \$490. Open.

Science. Number: Seven. Value: \$510. Open.

Engineering. Number: Seven. Value: \$530. Open.

Second Year

Arts. Number: Fifteen. Value: \$490. Fourteen Closed; one Open.

Commerce. Number: Four. Value: \$490. Three Closed; one Open.

Science. Number: Nine. Value: \$510. Eight Closed; one Open.

Engineering. Number: Eight. Value: Seven at \$510. Closed; one Open.

Third Year

Arts. Number: Two. Value: \$490. Closed.

Commerce. Number: Two. Value: \$490. Closed.

Science. Number: Three. Value: Three at \$510. Closed.

Fourth Year

Arts. Number: One. Value: \$490. Closed.

Commerce. Number: One. Value: \$490. Closed.

Science. Number: Two. Value: \$510. Closed.

Engineering. Number: One. Value: \$510. Closed.

THE BARTLETT MEMORIAL SCHOLARSHIP Value: \$80. Open.

THE BARTLETT-DOHERTY MEMORIAL SCHOLARSHIP Value: \$200. Open to students entering Third Science.

THE GASSON MEMORIAL SCHOLARSHIP Value: \$200. Open. Conditions: Open to students entering Third Commerce.

THE JONES MEMORIAL SCHOLARSHIP Value: \$80. Closed.

THE McCARTHY MEMORIAL SCHOLARSHIP Value: \$200. Open.

THE McMAHON MEMORIAL SCHOLARSHIP Number: Two. Value: \$80. Both Closed.

THE O'BRYAN MEMORIAL SCHOLARSHIP Value: \$80. Closed.

THE O'DOWD MEMORIAL SCHOLARSHIP Value: \$100. Open.

THE RECTOR'S SCHOLARSHIP Number: four. Value: one at \$160; three at \$150. One at \$150. Open.

C. annual gift scholarships

The funds for these Scholarships are presented to the College for administration or to the students by the donors themselves. These scholarships are Open or Closed as indicated, provided that the funds are available.

THE L.J.A. AMYOT SCHOLARSHIP Mr. L.J.A. Amyot of Quebec City paid the North American Life Insurance Company to issue a policy to Loyola College guaranteeing an annuity of one hundred dollars per annum for thirty years certain. This guarantee runs out in 1964. Value: \$100. Open. Conditions: Open to students entering Fourth Science.

THE CHARLES BROWN MEMORIAL SCHOLARSHIP Value: \$50. Closed.

THE MRS. CHARLES BROWN SCHOLARSHIPS Number: Two. Value: \$100. One Closed; one Open. Conditions: Open to students entering Third Commerce.

THE GUTELIUS MEMORIAL SCHOLARSHIP Number: Two. Value: \$100. One Closed; one Open. Conditions: Open to students entering Fourth Commerce.

THE KNIGHTS OF COLUMBUS COUNCIL 284 SCHOLARSHIP Value: \$150. Closed.

THE STATE COUNCIL, KNIGHTS OF COLUMBUS, PROVINCE OF QUEBEC SCHOLARSHIP Value: \$100. Open.

bursaries

A Bursary is a sum of money given to a student in order to assist him financially in the continuation of his studies.

A Bursary will take the form of a credit made to the student's tuition account.

Ordinarily bursaries will not be awarded to students with less than a 50% overall average.

Students desiring bursaries must make written application to: The Chairman, Scholarship Committee, Loyola College, Montreal 28.

Applications for bursaries must be made:

a) no later than September 1 for bursaries covering either full tuition or part tuition; applications received after the closing date will be retained and considered only after the second closing date and only for part of tuition;

b) no later than December 20 for bursaries covering part of the student's tuition. Applications received after this second closing date will not be considered and will be returned to the applicants. Freshmen may apply for a second semester bursary. Students are permitted to make only one application in any given academic year.

provincial bursaries

Students who have lived in a particular province for at least two years may apply for loans and bursaries from their respective provinces. As far as Quebec is concerned, the procedure is as follows: The student must write direct to: The Ministry of Education, Parliament Buildings, Quebec City, P.Q. and ask for an official application form. The student then fills in the form, has it signed by his parents, and has it stamped at the Student Aid Office, and then sends it back to Quebec so that it arrives there before 30th September. On no account are completed applications considered after 30th September.

THE IBM THOMAS J. WATSON MEMORIAL BURSARIES Donated by the International Business Machines Company Limited as part of the IBM Thomas J. Watson Memorial Bursary Program. Number: Two. Value: \$500 each. Conditions: Awarded annually to needy undergraduates in any year and faculty who are of good academic standing. Please apply at the Student Aid Office. Closing date is September 1st.

THE LOYOLA ALUMNI ASSOCIATION UNDERGRADUATE BURSARIES Number: Four. Value: \$100. Conditions: Awarded annually to talented and deserving students who have completed at least one year at Loyola College. Apply at the Student Aid Office by 20th December.

THE LOYOLA ALUMNI ASSOCIATION POSTGRADUATION BURSARIES—Number: Four. Value: \$100. Conditions: Awarded annually to talented and deserving students of the current graduating class who have been accepted for post graduate work at a recognized university. Apply at Alumni Office.

THE LOYOLA AFRICAN BURSARIES (A) Number: Four. Value: varies (includes full tuition, registration fee, room and board). Conditions: Awarded to qualified and deserving students from any country in Africa who intend to aid their homeland's development. (B) Number: Six. Value: varies (includes full tuition and registration fee). Conditions: Same as for Type (A).

THE LOYOLA BURSARY FOR THE BLIND Number: One. Value: Full tuition for one year; renewable. Conditions: To a blind student who is qualified to follow regular courses.

THE ST. PATRICK'S SOCIETY BURSARY Number: One. Value: \$200. Conditions: Awarded annually by the St. Patrick's Society of Montreal preferably to a Fourth Year Student in any faculty who is Irish or of Irish extraction. Application forms may be obtained at the Student Aid Office. Closing date is December 20th.

THE TOUCHE, ROSS, BAILEY AND SMART BURSARY Number: One. Value: \$200. Conditions: "This bursary... will be awarded annually to a student who is completing his third year and will be entering his final year, majoring in Accountancy in the Faculty of Commerce, and who intends on graduation to pursue the qualification of Chartered Accountant. The award will be made on the basis of academic record, ability, personality and other suitable characteristics...."

the Loyola alumni student loan fund

The Loan Fund exists to aid students who are in financial difficulties. Because of limited resources, the trustees of the Fund normally will consider loans to students who: 1) have been successful in their last set of final examinations at Loyola; 2) are receiving a bursary from the Province of Quebec; and 3) are prepared to repay the loan by the end of the next summer.

Applications should be made in writing to: Loyola Alumni Student Loan Fund, Loyola College, 7141 Sherbrooke Street West, Montreal 28.

commonwealth scholarships

Under a Plan drawn up at a conference held in Oxford in 1959, each participating country of the Commonwealth offers a number of scholarships to students of other Commonwealth countries. These scholarships are mainly for graduate study and are tenable in the country making the offer. Awards are normally for two years and cover travelling, tuition fees, other university fees, and a living allowance. For details of the awards offered by the various countries consult the Registrar's office or write to The Canadian Universities Foundation, 77 Metcalfe Street, Ottawa, Ontario.

awards

GOVERNOR-GENERAL'S MEDAL Presented by His Excellency the Governor-General of Canada to the student with the highest overall average in the four years of Arts.

LIEUTENANT-GOVERNOR'S SILVER MEDAL Presented by His Honour the Lieutenant-Governor of the Province of Quebec to the student with the highest overall average in the four years of Science.

LIEUTENANT-GOVERNOR'S BRONZE MEDAL Presented by His Honour the Lieutenant-Governor of the Province of Quebec to the student with the highest overall average in the four years of Commerce.

LOYOLA GOVERNOR'S MEDAL Presented by the Loyola Board of Governors to the student with the highest overall average in the four years of Engineering.

THE LOYOLA MEDAL Presented by the Loyola College C.O.T.C. to the most representative Loyola student among the graduates.

THE PHILOSOPHY GOLD MEDAL AWARD Presented by Loyola College to the outstanding student in Philosophy among the graduates, and awarded upon the recommendations of the Philosophy professors.

THE HAMILTON WATCH AWARD Presented by the Hamilton Watch Company to the student who has most successfully combined proficiency in Accounting with achievement, either academic, extra-curricular, or a combination of both, in the social sciences or humanities.

THE HAMILTON WATCH AWARD Presented by the Hamilton Watch Company to the student who has most successfully combined proficiency in Mathematics with achievement, either academic, extra-curricular, or a combination of both, in the social sciences or humanities.

THE SOCIETY OF CHEMICAL INDUSTRY, CANADIAN SECTION, MERIT AWARD Presented by the Society of Chemical Industry to the highest-ranking (minimum 75%) student in the fourth year, majoring in Chemistry, Chemistry-Physics, or Chemistry-Mathematics, and who has completed the course in the normal number of years.

prizes

THE WILLIAM H. ATHERTON PRIZE Donated by the late Dr. William H. Atherton, and to be awarded to the student outstanding for research in Canadian History.

THE ISAIAH S. BENJAMIN PRIZE FOR MATHEMATICS Donated by Dr. Isaiah S. Benjamin of Montreal to the Third Year student with the highest three-year average in Mathematics subjects.

THE CHEMCELL (1963) LIMITED PRIZE FOR CHEMISTRY Donated by Chem-cell (1963) Limited and awarded to the graduating student with the highest four-year average in Chemistry subjects.

THE CHEMCELL (1963) LIMITED PRIZE FOR ENGLISH Donated by Chem-cell (1963) Limited and awarded to the graduating student in the Arts program, taking a Major or an Honours in English, with the highest four-year average in English subjects.

THE ECONOMICS PRIZE Granted by the College to the graduating student in Arts or Commerce, taking a Major or an Honours in Economics, with the highest four-year average in Economics subjects.

THE GERMAN LANGUAGE PRIZE Donated by the Consulate General of the Federal Republic of Germany to the student who has shown the greatest progress in the German Language course offered at Loyola College.

THE FRANK JARVIS PRIZE FOR POLITICAL SCIENCE Donated by Mr. Frank Jarvis and to be awarded to the graduating student with the highest marks in Political Science in his fourth year.

THE KNIGHTS OF COLUMBUS PRIZE FOR CANADIAN HISTORY Donated by the Knights of Columbus of the Province of Quebec and awarded to the student who has obtained the highest mark in Canadian History during the current academic year.

THE R.E. O'CONNOR PRIZE FOR MATHEMATICS Donated by Dr. Isaiah S. Benjamin of Montreal to the student graduating in Science or Engineering with the highest four-year average in Mathematics subjects.

THE PHYSICS PRIZE Granted by the College to the graduating student in Physics with the highest four-year average in Physics subjects.

THE DR. JACQUES SMITH MEMORIAL PRIZE Donated by Dr. Kurt Ekler in memory of Dr. Jacques Smith, chief of surgery at the Hotel Dieu Hospital (St. Jerome) and a graduate of Loyola, who died suddenly in 1960 at the age of thirty-six. Awarded to the graduating student with the highest four-year aggregate standing in the Biology-Chemistry course (Science or Arts).

THE MRS. ALFRED THIBAudeau PRIZE FOR POLITICAL SCIENCE Donated by Miss Madeleine Thibaudeau in memory of her mother, Madame Alfred Thibaudeau, and to be awarded to the graduating student with the second highest average in the field of Political Science.

THE MRS. RENEE VAUTELET PRIZE FOR POLITICAL SCIENCE Donated by Mrs. Renée Vautelet and to be awarded to the graduating student with the highest average in the field of Political Science.

courses

faculty of arts

Students who enter the Faculty of Arts may follow the General course or the Honours program.

In the General course they may choose a field of concentration (major) in any one of the following: Biology-Chemistry, (which meets pre-medical requirements), Classics, Economics, English, French, History, Philosophy, Political Science, Spanish, Theology. This program is of four years' duration and consists of twenty-two full courses, five at least of which must be in the field of concentration.

The Honours Program is designed for students who want a deeper and more extensive knowledge of their field of concentration and who wish to pursue post-graduate studies. The field of concentration is normally chosen at the end of the First Year. However, a particular field of concentration may dictate the electives to be taken in First Year. Throughout the Honours program students must maintain a yearly average of 65% and must not obtain less than 65% in any course in their field of concentration. Freshmen who enter with a 70% average and who wish to follow the Honours program should consult with the Department of their choice during the period of academic counselling preceding Registration.

faculty of commerce

Students may choose to study for a Bachelor of Commerce in the four year general program with concentration in either Accounting or Economics. Qualified students may choose to study the Commerce Honours Economics program which is designed for those who wish to do further study in Economics after graduation. The Economics content of the Honours program is the same as the Arts program. Those who choose to follow a Major must maintain a yearly average of 60%; 65% is required for Honours.

Those students who follow a major in Accounting, with good results, are exempted from the Intermediate Examinations of the Institute of

Chartered Accountants of the Province of Quebec and are also exempt from three of the five years' apprenticeship required for the C.A. Certificate.

faculty of science

The General Science program leading to a Bachelor of Science is four years of study in a field of concentration (Major) in one of Biology-Chemistry (which fulfils premedical requirements); Chemistry; Mathematics; Physics. Applicants to this program must show better than average marks in science and mathematics.

The Honours Science program may be followed in Chemistry, Mathematics or Physics. The Honours Chemistry fulfils the requirements for professional membership in the Chemical Institute of Canada. Applicants for the Honours program must have at least a 70% average in their final high school examinations. Those who enter Honours programs must have successfully passed courses in Intermediate Algebra and Trigonometry. Throughout the Honours program students must maintain a yearly average of 65% and obtain not less than 65% in any course of their field of concentration. Freshmen who wish to follow an Honours program should consult with the Departments concerned at the sessions of academic counselling which precede Registration.

faculty of engineering

At the present time, the Faculty of Engineering offers the degree of Bachelor of Science based on a four year program of Engineering and Arts.

A student who enters the course with Junior Matriculation and achieves his degree, has completed the same program of engineering studies as is offered in the first three years of the Engineering Faculties of other Universities in Quebec. Thus, it is normal for a student who has achieved his degree at Loyola to be accepted for transfer to the fourth year of the 5-year course in the Engineering Faculties of the other Universities in Quebec, or to the third year of the 4-year course in other provinces.

Students who have achieved Senior Matriculation will be considered for entry into the Second Year of Engineering.

requirements for admission

Details of courses offered and areas of specialization are set out in the Engineering section.

accounting

L. M. Bessner	(Department Chairman)	Associate Professor
R. L. McGraw		Assistant Professor
G. M. Bonder		Lecturer
D. F. MacDonald		Lecturer
E. C. Whitehall		Lecturer

101 Elements of Accounting. Full Course. R. L. McGraw D. F. MacDonald

Introduction to Books of Account and Financial Statements: theory of debit and credit; principles of double entry; books of original entry; recording of transactions through the general, sales, and purchase journals; special forms of cash books; controlling accounts; general ledger; accounts receivable and accounts payable ledgers; discounts, interest, prepaid and accrued charges; notes and bills of exchange; cheques, invoices, statements of account, bills of lading and other commercial papers; imprest system of petty cash; depreciation; provision for bad debts and discounts; inward and outward consignments; capital and revenue expenditures; bank reconciliations; preparation of trading and profit and loss statements and balance sheets, single proprietorship; introduction to work sheet.

Lectures: 3 hours per week for two terms.

Text: Finney and Miller, *Principles of Accounting — Introductory*. Can. 5th ed., Prentice-Hall. Smalls, *Accounting Principles*. Ryerson.

202 Intermediate Accounting. Full Course. G. Bonder D.F. MacDonald

Operating Statements and Balance Sheets with enlargement of Work Sheet Practice introduced in First Year. Partnerships: formation; the partnership agreement; classes of partners and of partnerships; rights, duties, and powers of partners; distribution of profits; admission and withdrawal of partners; partnership dissolution; sale of a partnership to a corporation; default of a partner, goodwill.

Corporations — Legal Aspects: formation and control; shareholders, directors; meetings; public and private companies; capital stock; limited liability; statutory books; auditors; dissolution; accounting for corporation taking over sole proprietor or partnership; exchange of shares in corporation for assets in business selling out.

Manufacturing Accounts and Statements: factory departments; elements of cost; materials and supplies; work in process and finished goods accounts; periodic and perpetual inventories.

Departmental Accounts: distribution of charges to departments; comparison of department operations.

Depreciation: causes of and accounting for depreciation. Reserves and reserve funds.

Principles of valuation of current and fixed assets and liabilities; inventories; theory of valuation.

Single entry conversion to double entry.

An "H" following a course number means that the course is an Honours course.

Bonds and Debentures: security payment of interest and principal; trust deed; issue and redemption; accounting for bond issue, interest and amortization.

Lectures: 3 hours per week for two terms.

Texts: Smalls, *Accounting Principles*. Ryerson Finney and Miller, *Principles of Accounting — Intermediate*. Can. 5th ed., Prentice-Hall.

204 Intermediate Accounting. Full Course.

Similar to Accounting 202 - only for Majors in Commerce.

303 Accounting and Auditing. Full Course. R. L. McGraw

Analysis and interpretation of financial statements; statements of source and application of funds; comparative ratios and share evaluation.

Introduction to auditing; classification and scope of audits; internal control; legal and moral responsibilities of auditors with reference to court decisions; fraud and error in accounts; requirements of Federal and Provincial Companies Acts; audit certificates and reports; programmes and working papers.

Lectures: 3 hours per week for two terms.

Texts: Finney and Miller, *Principles of Accounting — Intermediate*. Can. 5th ed., Prentice-Hall. Stettler, *Auditing Principles*. Prentice-Hall. Smalls, *Auditing*. Ryerson. *Quebec Companies Act*. Queen's Printer. *Companies Act, 1952*. Queen's Printer. *Bulletins of Canadian Institute of Chartered Accountants*.

306 Accounting and Auditing — Advanced. Full Course.

E. G. Whitehall

Joint ventures; installment sales; holding companies; consolidations; mergers; amalgamations; re-organization and reconstruction; branch accounts and consignments including foreign entities.

Investigations: nature and classes of business investigations; requirements for prospectus; sale of business by proprietors, partnerships and corporations with valuation of goodwill.

Lectures: 3 hours per week for two terms.

Texts: Karrenbrock and Simons, *Advanced Accounting*. 3rd ed., Southwestern. Smalls, *Accounting Principles*. Ryerson.

405 Cost Accounting, Estate Tax, Bankruptcy and Income Tax. Full Course.

L. M. Bessner

Cost Accounting: terms and cost formulae; elements of cost; cost records; cost reports; estimating cost systems; standard costs; job costs; variances; cost ratios; differential and direct costing.

Budgetary Control: preparation and control of the budget, variable expense budgets.

Executors: charge and discharge statements; capital and income; division of an estate; estate tax and succession duties. Bankruptcy and Liquidation Accounts: receivers' accounts; priority of creditors; statement of affairs; deficiency account; realization and liquidation statement.

Income Tax: individuals; proprietors; partners; corporations; general considerations.

Lectures: 3 hours per week for two terms.

Texts: Matz, Curry and Frank, *Cost Accounting*. 3rd ed., Gage. Karrenbrock and Simons, *Advanced Accounting*. 3rd ed., Southwestern. Gilmour, *Income Tax Handbook, 1963-64*. *Estate Tax Act*. Queen's Printer. *Canadian Bankruptcy Act*. Queen's Printer.

406 Advanced Auditing and Specialization. Full Course.

L. M. Bessner

A continuation of Accounting and Auditing: commercial and life insurance including pension plans; machine accounting; investigations for frauds, etc.; report writing in detail; Fund Accounting, including hospitals, municipalities, universities and non-profit organizations; rules of professional conduct; management advisory services.

Lectures: 3 hours per week for two terms.

Texts: Karrenbrock and Simons, *Advanced Accounting*. 3rd ed., Southwestern. Finney and Miller, *Principles of Accounting Advanced*. Can. 5th ed., Prentice-Hall.

Students holding the Bachelor of Commerce degree with a Major in Accounting from Loyola College are usually exempted on recommendation from the Intermediate examinations of the Institute of Chartered Accountants of Quebec. They are also usually exempted from three of the five years of apprenticeship required for the C.A. certificate.

All other graduates of the College who wish to enter the profession of Accounting, but who have not followed the curriculum (as described above) for an Accounting Major, may do so by successfully completing a prescribed course of training which normally consists of three years of Evening Courses in Accounting, with at least two years of service in an approved office. For additional information, please consult the Chairman of the Accounting Department.

Courses leading to a B. Comm. with a Major in Accounting.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
ACCOUNTING 101	ACCOUNTING 202	ACCOUNTING 303	ACCOUNTING 405
Economics 102	Business 201	ACCOUNTING 306	Auditing 406
English 101	Business 204	English	Philosophy 404
French	French	Philosophy 303	Theology
Mathematics 101	Mathematics 202	Elective (1) from	Elective (1) from
Theology 101	Mathematics 203	Business or	Business or
	Philosophy 202	Economics or	Economics or
		Mathematics or	Mathematics or
		Political Science	Political Science

biology

Rev. S. Drummond, S.J. (Department Chairman) Professor
Rev. R. T. Cronin, S.J. Assistant Professor

101 Fundamental Biology. Full Course.

A series of lectures and demonstrations designed to acquaint the general student with those fundamental principles of life which are the basis for an understanding of the structure and function of the living body.

Lectures: 2 hours per week for two terms.

202 Invertebrate Zoology. Full Course.**R. T. Cronin**

Theory. The course begins with a study of scientific methodology and its application to the living sciences. The nature and characteristics of protoplasm are explained and these are correlated with a discussion of the cell as the unit of structure and function. These basic principles are then utilized in a detailed study of the phyla of the invertebrate animals.

Laboratory. A detailed study of representative animals of the invertebrate phyla. The first part offers intensive exercises in the use of the microscope and the interpretation of microscopic sections. The second half affords training in manual dexterity necessary for precise dissection.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Storer and Usinger, *General Zoology*, McGraw-Hill.

304 Vertebrate Zoology Theory. Full Course. S. Drummond

The course opens with a study of the characteristics and classification of the vertebrates. The basic structure of the vertebrate body is outlined. Following this, the important type vertebrates are studied in detail, particular stress being laid on embryological development, structure and function.

Prerequisite: Biology 202 Theory.

Lectures: 2 hours per week for two terms.

Text: Storer and Usinger, *General Zoology*, McGraw-Hill.

305 Vertebrate Zoology Laboratory. Half Course.**S. Drummond**

The course comprises a detailed study of the structure of amphioxus, dogfish, frog and rabbit. The course is so conducted that, by training in exact dissection, observation and the preparation of carefully executed drawings, the student may be able to trace the main features of organization from the lower to the higher vertebrates.

Prerequisite: Biology 202 Lab.

Lab: 6 hours per week for two terms.

Text: Storer and Usinger, *General Zoology*, McGraw-Hill. Craigie-Bensley, *Practical Anatomy of the Rabbit*. Univ. of Toronto Press.

406 Histology. Half Course.**S. Drummond**

Theory. An introductory study of the cell, cell division and the general tissues. The course is designed to explain in detail the structure and function of the basic tissues and to introduce the various combinations of these in the special tissues of the adult body.

Laboratory. A series of exercises designed to introduce the student to the fundamentals of cytological and histological technique, and to illustrate, by means of prepared slides, mitosis, meiosis, as well as the microscopic characteristics of the basic types of histological tissues.

Lectures: 2 hours per week for one term.

Lab: 3 hours per week for one term.

408 Genetics. Half Course.**R. T. Cronin**

Theory. A series of lectures designed to explain the principles of heredity and variation.

Laboratory. A selection of experiments to demonstrate the methods and principles of genetics.

Lectures: 2 hours per week for one term.

Lab: 3 hours per week for one term.

Courses leading to B.A. with a Major in Biology-Chemistry.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	BIOLOGY 202 CHEMISTRY 101	BIOLOGY 304 BIOLOGY 305	BIOLOGY 406 BIOLOGY 408
English 101	CHEMISTRY 102	CHEMISTRY 101a	CHEMISTRY 212c
French	Classics 202 or 221 or 222	CHEMISTRY 102a	CHEMISTRY 221
Mathematics 101		CHEMISTRY 212b	CHEMISTRY 222
Theology 101	French	Philosophy 303	English d
Elective (1)	Philosophy 202 Theology	Physics 101 Theology	Mathematics 202 Philosophy 404

a — offered only in 1964-65.

b — offered in 1965-66.

c — offered only in 1964-65 and 1965-66.

d — to be offered in 1966-67.

Courses leading to a B.Sc. with a Major in Biology-Chemistry.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CHEMISTRY 101	BIOLOGY 202	BIOLOGY 304	BIOLOGY 406
CHEMISTRY 102	CHEMISTRY 212	BIOLOGY 305	BIOLOGY 408
English 101	CHEMISTRY 221	CHEMISTRY 323	CHEMISTRY 425
French	CHEMISTRY 222	CHEMISTRY 324	English
Mathematics 106	Philosophy 202	French	Mathematics 202
Mathematics 107 - and-108 or 205	Theology	Philosophy 303	Philosophy 404
Mathematics 206		Theology	Social Science Elective (1)
Physics 101			
Theology 101			

business

M. Kawaja Lecturer
L. A. Saint-Pierre Lecturer

Those interested in Business please consult the Director of Commerce.

201 Commercial Law. Full Course.**L. A. Saint-Pierre**

Laws of contracts, sales agency, partnership, company law and negotiable instruments.

Lectures: 3 hours per week for two terms.

204 Economics of the Firm. Full Course.**M. Kawaja**

This course is substantially the same as Economics 204.

Lectures: 3 hours per week for two terms.

301 Finance. Full Course. M. Kawaja

This course deals with such aspects of financial management as financial planning, capital structure, investment management, refinancing, financial control.

Lectures: 3 hours per week for two terms.

401 Marketing. Full Course. M. Kawaja

This course is devoted to such topics as market research, trends in marketing, marketing costs, product, policy, pricing, sales organization, sales promotion, legislation affecting marketing.

Lectures: 3 hours per week for two terms.

411 Business Organization. Full Course. (not offered in 1964-65)

This course covers a number of topics in business organization and policy; the role of management, determination of objectives, policy-making, internal organization and control, the role of business in society, human relations in business, relations of business with government.

Lectures: 3 hours per week for two terms.

421 Managerial Economics. Full Course. (not offered in 1964-65)

This course is concerned with the integration of economic theory with business practice in relation to the process of decision making and forward planning by management. The topics covered include: the framework of management decision making, demand and cost analysis, forecasting methods, pricing policies and practices, competition and control, capital management.

Lectures: 3 hours per week for two terms.

chemistry

Rev. A. Graham, S.J. (Department Chairman) Associate Professor

K. Ekler	Associate Professor
D. McElcheran	Associate Professor
T. Nogrady	Associate Professor
M. Doughty	Assistant Professor
A. Bandrauk	Lecturer

101 General Chemistry. Full Course. K. Ekler, A. Bandrauk

Principles of Chemistry. Molecular and Atomic theories. Balancing Equations. Valence. Oxidation-reduction. Nature and concentrations of solutions. Chemical Equilibrium, Ionization constants. Solubility product. Common ion effect. pH. Formation and dissolution of precipitates. Complex ions. Theory of acids and bases. Periodic table.

Lectures: 3 hours per week for two terms.

Texts: Sister, *College Chemistry*. 2nd ed., Macmillan. Sorum, *Introduction to Semimicro Qualitative Analysis*. 3rd ed., Prentice-Hall. Schaum, *Theory and Problems for Students of College Chemistry*. 4th ed., Schaum.

102 General Chemistry. Half Course. M. Doughty

An introductory course designed to improve manipulative ability in the laboratory. A first semester of inorganic preparations and volumetric titrations is followed by one devoted entirely to qualitative analysis.

Lab: 3 hours per week for two terms.

Text: Sorum, *Semimicro Qualitative Analysis*. 3rd ed., Prentice-Hall.

211 Inorganic Chemistry and Valence Theory. Half Course.

K. Ekler

Atomic and Molecular Structure. Valence. Electro-negativity. Bond angles and lengths. Coordination chemistry. Chemical periodicity.

Lectures: 1 hour per week for two terms.

212 Elementary Inorganic Quantitative Analysis. Full Course.

K. Ekler

Theoretical aspects of gravimetric and volumetric analysis. Acid-base and oxidation-reduction titrations. Determination of ores by volumetric methods. Theory of precipitation and complex formation analysis.

Lectures: 1 hour per week for two terms.

Lab: 3 hours per week for two terms.

Text: Kolthoff and Sandell, *Quantitative Inorganic Analysis*. Macmillan.

221 Organic Chemistry Theory. Full Course. M. Doughty

Introductory course in nomenclature, type reactions and synthesis of aliphatic, alicyclic and aromatic hydrocarbons and their derivatives. Theoretical aspects including resonance, orbital theory and simpler reaction mechanisms are introduced.

Prerequisite: Chemistry 101.

Lectures: 3 hours per week for two terms.

Text: English and Cassidy, *Principles of Organic Chemistry*. McGraw-Hill.

222 Organic Chemistry Laboratory. Half Course. A. Graham

T. Nogrady

A systematic preparation of simpler organic compounds; the theory of fundamental techniques such as steam distillation; filtration; the determination of physical constants. To be taken in conjunction with Chemistry 221.

Prerequisite: Chemistry 102.

Lab: 3 hours per week for two terms.

Text: Cason and Rapoport, *Laboratory Text in Organic Chemistry*. Prentice-Hall.

231 Introductory Physical Chemistry. Full Course.

D. McElcheran

The principles of physical chemistry, based on elementary kinetic theory and thermodynamics. Includes the following topics:

the gas state, first and second laws of thermodynamics, liquid and solid states, solutions, homogeneous and heterogeneous equilibria, reaction kinetics, electrochemical phenomena. Problems form an integral part of the course.

Lectures: 3 hours per week for two terms.

313 Quantitative Inorganic Analysis (Adv.). Full Course. K. Ekler

A study of instrumental analytical methods. Electro-deposition; potentiometry; amperometry; absorption of radiation; gas analysis; ion exchange separations; polarography.

Prerequisite: Chemistry 211, 212.

Lectures: 1 hour per week for one term.

Lab: 6 hours per week for one term.

Texts: Kolthoff and Laitinen, *pH and Electro Titration*. Wiley. Ewing, *Instrumental Methods of Chemical Analysis*. McGraw-Hill. Sandell, *Colorimetric Determination of Traces of Metals*. Interscience. Reilly and Sawyer, *Experiments for Instrumental Methods*. McGraw-Hill.

323 Organic Chemistry Theory. Full Course. T. Nogrady

Critical review and extension of aliphatic and aromatic reactions; more intensive study of reaction mechanisms, stereoisomerism; carbohydrates; problems of synthesis and identification.

Prerequisite: Chemistry 221.

Lectures: 2 hours per week for two terms.

Text: Brewster and McEwen, *Organic Chemistry*. 3rd ed., Prentice-Hall.

324 Identification of Organic Compounds. Full Course. A. Graham

Theory and practice of organic qualitative analysis: most of the laboratory time is given to the identification of unknown compounds and the separation and identification of a simple mixture.

Prerequisite: Chemistry 222.

Lectures: 1 hour per week for two terms.

Lab: 3 hours per week for two terms.

Text: McElwain, *The Characterization of Organic Compounds*. Macmillan.

332 Advanced Physical Chemistry. Full Course. D. McElcheran

Selected topics include: structure of solid state, surface phenomena, the colloidal state, phase rule.

Prerequisite: Chemistry 231.

Lectures: 2 hours per week for two terms.

333 Physical Chemistry Laboratory. D. McElcheran

To be taken in conjunction with Chemistry 332.

Lab: 4 hours per week (one afternoon) for two terms.

Text: Daniels *et al.*, *Experimental Physical Chemistry*. 5th ed., McGraw-Hill.

334 Thermodynamics. Full Course. D. McElcheran

A thorough study of classical thermodynamics. Considerable emphasis placed on physical as well as chemical application.

Prerequisite: Chemistry 231; Mathematics 205.

Lectures: 2 hours per week for two terms.

425 Organic Chemistry Theory. Full Course. A. Graham
T. Nogrady

Selected topics of organic chemistry, including terpenes, steroids, heterocyclic compounds, polymers and alkaloids. Reaction mechanisms and such stereochemical aspects as conformational analysis are treated extensively; the biological significance of many compounds is stressed.

Prerequisite: Chemistry 222, 323.

Lectures: 2 hours per week for two terms.

426 Organic Preparation Laboratory. Full Course. A. Graham
T. Nogrady

The student performs a varying series of more difficult preparations and is expected to become proficient in such technique as vacuum distillation, catalytic hydrogenation and the manipulation of larger scale bench equipment. A sound knowledge of theory is required.

Prerequisite: Chemistry 222, 324.

Lab: 6 hours per week for two terms.

Text: Vogel, *A Text-Book of Practical Chemistry*. Longmans.

435 Advanced Physical Chemistry Laboratory. Full Course. D. McElcheran

A continuation of Chemistry 333, but fewer and more demanding experiments.

Prerequisite: Chemistry 333.

Lab: 4 hours per week for two terms.

436 Electrochemistry. Half Course. K. Ekler

Electrolytic conduction and electrolysis: Faraday's laws; specific and equivalent conductance and measurement of conductance; mobility and transport number; theory of strong electrolytes; thermodynamics of cells; electrode potentials; concentration cells; liquid junction potentials; overvoltage and polarization phenomena.

Prerequisite: Chemistry 332, 334.

Lectures: 2 hours per week for one term.

437 Kinetic Theory and Chemical Kinetics. Full Course.

D. McElcheran

The classical atomic theory. Kinetic theory of gases; the statistical mechanical approach to the Maxwell-Boltzmann Distribution; Collision phenomena. Reaction Kinetics. The rate laws; Classical collision theory; Activated State Theory; Reaction Mechanisms; Free Radical chemistry; Chain processes.

Prerequisite: Chemistry 332, 334.

Lectures: 2 hours per week for two terms.

438 Quantum Chemistry. Half Course.

A. Bandrauk

The transition from classical to modern physics. Michelson-Morley experiment — special theory of relativity, Plank's Black Body Radiation, Photoelectric effect; Radioactivity and the fundamental particles; the Rutherford-Bohr-atom, Schrodinger Wave Equation Atomic Spectra, Molecular structure and bonding.

Lectures: 2 hours per week for one term.

450 Senior Thesis. Half Course.

Staff

The Department will make available to selected students a senior thesis in Organic or Physical Chemistry to be done in the second term.

Courses leading to an Honours B.Sc. in Chemistry.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CHEMISTRY 101	CHEMISTRY 211	CHEMISTRY 313	CHEMISTRY 425
CHEMISTRY 102	CHEMISTRY 213	CHEMISTRY 323	CHEMISTRY 426
English 101	CHEMISTRY 221	CHEMISTRY 324	CHEMISTRY 435
French	CHEMISTRY 231	CHEMISTRY 332	CHEMISTRY 436
Mathematics 106	French	CHEMISTRY 333	CHEMISTRY 437
Mathematics 205	Mathematics 205	CHEMISTRY 334	CHEMISTRY 438
Mathematics 206	Philosophy 202	English	Philosophy 404
Physics 101	Theology	Mathematics 309	Physics 421
Theology 101		Philosophy 303	
		Physics 204	
		Physics 205	
		Theology	

Courses leading to a B.Sc. with a Major in Chemistry.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CHEMISTRY 101	CHEMISTRY 211	CHEMISTRY 231	CHEMISTRY 332
CHEMISTRY 102	CHEMISTRY 212	CHEMISTRY 313	CHEMISTRY 333
English 101	CHEMISTRY 221	CHEMISTRY 323	CHEMISTRY 425
French	CHEMISTRY 222	CHEMISTRY 324	CHEMISTRY 426
Mathematics 106	French	English	CHEMISTRY 334 or 437
Mathematics 206	Mathematics 205	Philosophy 303	Philosophy 404
Mathematics 107- and-108 or 205	Mathematics 206	Theology	
Physics 101	Philosophy 202		
Theology 101	Theology		

classics

Mrs. E.E. Cran (acting Department Chairman) Assistant Professor

J. E. Lempkowski Lecturer

D. C. Scavone Lecturer

Mrs. B. Wardy Lecturer

The requirements in Classics for Arts students may be fulfilled in the following ways:

a) Classics 101, 102, 202. } For those who wish to begin the study of Latin or Greek in College.

b) Classics 111, 112, 212. }

c) Classics 102, 202.

d) Classics 112, 212.

e) Classics 121, 221 or 222.

Normally the courses in these sequences are taken in successive years, but this need not be the case in sequence e).

Note: all students in Greek or Latin are required to provide themselves with dictionaries.

102 Latin Translation and Prose Composition. Full Course.

B. Wardy, J.E. Lempkowski

This course includes Livy (Book XXI) and selections from Petrie's *Latin Reader*. The practice gives training in the syntax of Latin grammar principally for the better comprehension of the authors, but also for the development of some facility in Latin prose composition. Some sight translation is included.

Prerequisite: Junior Matriculation Latin or Classics 101.

Lectures: 3 hours per week for two terms.

111 Elementary Greek. Full Course.

E. E. Cran

A course for those with no previous knowledge of Greek.

Lectures: 3 hours per week for two terms.

Text: Nairn and Nairn, *Greek through Reading*.

112 Greek Translation and Prose Composition. Full Course.

E. E. Cran

Prerequisite: Junior Matriculation Greek or Classics 111.

Lectures: 3 hours per week for two terms.

Texts: Homer, *Odyssey*. Bk. IX. Plato, *Apology of Socrates*.

121 Classics in Translation. Full Course.

D. C. Scavone

The purpose of this course is to introduce students to the literature and history of Greece and Rome. The emphasis is on literature and such other aspects of cultural and political development as are necessary for an understanding of literature and significant for us today. Readings, which are in English, are chosen to illustrate the most typical literary forms of the periods studied, as well as to provide an introduction to some of the most important classical authors.

Texts: Homer, *The Odyssey*. Plato, *Apology of Socrates*. Crito, *Euthypro*. Virgil, *The Aeneid*. Selections from Herodotus, Cicero, and other Greek and Roman authors.

202 Latin Translation and Prose Composition. Full Course.

B. Wardy

The works studied are Cicero's *Pro Lege Manilia* and selections from Horace's *Satires*; the practice emphasizes the more detailed study of Latin grammatical constructions and the writing of more advanced Latin prose.

Prerequisite: Classics 102.

Lectures: 3 hours per week for two terms.

Text: Robertson, *Latin Prose Composition*.

212 Greek Translation and Prose Composition. Full Course.

J. E. Lempkowski

Prerequisite: Classics 112.

Lectures: 3 hours per week for two terms.

Texts: Euripides, *Medea*. Lysias, *Selected Orations*.

221 Classics in Translation: Ancient Drama. Full Course.

E. E. Cran

A study of selected plays by Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus and Terence.

Lectures: 3 hours per week for two terms.

222 Classics in Translation. Full Course. J. E. Lempkowski

A continuation of the study of classical civilization begun in Classics 121. Special attention is paid to tracing the development of significant ideas concerning the moral, social and political responsibility of man, as well as to the growth of literary genres.

Lectures: 3 hours per week for two terms.

Texts: Homer, *The Iliad*. Greek Lyric Poetry. Plutarch, *Nine Athenian Lives*. Plato, *The Republic*. Apollonius of Rhodes, *The Argonautics*. Lucian, *Satirical Sketches*. Ovid, *The Metamorphoses*. Horace, *Satires*. Juvenal, *Satires*.

302 Latin Authors. Full Course.

J. E. Lempkowski

Prerequisite: Classics 202.

Lectures: 3 hours per week for two terms.

303A Latin Prose Composition. Half Course.

Prerequisite: Classics 202.

Lectures: 1 hour per week for two terms.

303B History of Latin Literature. Half Course.

A study of Latin literature from the beginnings to Virgil.

Lectures: 2 hours per week for two terms.

312 Greek Authors. Full Course. (not offered in 1964-65)

Prerequisite: Classics 212.

Lectures: 3 hours per week for two terms.

330 Ancient History. Full Course.

D. C. Scavone

This course investigates the origins of western civilization in the cultures of ancient Egypt, Mesopotamia, Israel, Persia, Greece and Rome, ending with the age of Constantine.

Lectures: 3 hours per week for two terms.

402 Latin Authors. Full Course. (not offered in 1964-65)

Prerequisite: Classics 202.

Lectures: 3 hours per week for two terms.

412 Greek Authors. Full Course. (not offered in 1964-65)

Prerequisite: Classics 212.

Lectures: 3 hours per week for two terms.

Courses leading to a B.A. with a Major in Classics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CLASSICS 102	CLASSICS 202	CLASSICS 302	CLASSICS 402
English 101	CLASSICS Elective (1)	CLASSICS 303A	CLASSICS 403
French	from 121, 212,	CLASSICS 303B	Philosophy 404
Mathematics 101	221, 330	Philosophy 303	Electives (2)
Theology 101	English	Theology	one should be
Elective (1)	French	Elective (1)	a CLASSICS
preferably	Philosophy 202	preferably	
CLASSICS 112	Theology	CLASSICS 330	
or 121		if not previously	
		taken	

The course leading to a B.A. with a Major in Greek follows a similar pattern. Those interested should consult the Department Chairman.

economics

F. J. Hayes (Department Chairman)	Associate Professor
S. A. Alvi	Assistant Professor
A. G. Lallier	Assistant Professor
N. G. Pillai	Assistant Professor
Rev. W. F. Ryan	Assistant Professor
L. Simcoe	Assistant Professor
A. Vicas	Assistant Professor
P. M. Blaikie	Lecturer
R. I. Peterson	Lecturer

102 Principle of Economics. Full Course.

Staff

A survey of the existing economic order, with particular emphasis on the salient characteristics of the North American Economy. Concentration is on explaining and evaluating the operation of the price system as it regulates production, distribution, and consumption, and as it in turn is modified and influenced by private organization and government policy. Consideration is also given to the determination of aggregate economic activity. The main areas studied include: the monetary and banking systems in the United States and Canada; the composition and fluctuations of national income; and the major conditions of economic growth; all as influenced by monetary, fiscal and other policies.

Lectures: 3 hours per week for two terms.

204 Economics of the Firm. Full Course.

Staff

In this course consideration will be given to such topics as: theory and measurement of demand; demand forecasts; production functions; cost analysis; price and output policy under various market conditions; factor pricing.

Lectures: 3 hours per week for two terms.

204H Economics of the Firm. Full Course.

Staff

Lectures: 3 hours per week for two terms.

207 Economic Method. Full Course.

A. Vicas

A study of selected topics in methods of economic analysis, including: the nature of valid arguments, the notion of sets of economic variables, the concept of rational behavior, differential calculus, game theory, linear programming.

Lectures: 3 hours per week for two terms.

- 301 Economic History. Full Course.** P. M. Blaikie
An analysis of the development of Western Europe, Canada and the United States.
Lectures: 3 hours per week for two terms.
- 302 Theories and Processes of Economic Growth and Development. Full Course.** W. F. Ryan
A consideration of various contributions by economists and others to an understanding of how societies grow and undergo institutional change. The course also includes a study of the problem of accelerating economic growth, with emphasis on selected developing nations of the present time, an analysis of the process of capital formation, the role of the state (in different politico-economic systems), the role of external assistance in economic development, and the economics of investment decisions. Emphasis is also given to the interaction of cultural change and economic development.
Lectures: 3 hours per week for two terms.
- 305 Money, Banking, and Income Theory. Full Course.** L. Simcoe
The functions of money; money and prices; the evolution and kinds of money; the value of money; the supply of money; monetary and banking developments in Canada, the United States and the United Kingdom; the determinants of national income; the multiplier and acceleration principles; monetary and fiscal policy.
Lectures: 3 hours per week for two terms.
- 305H Money, Banking and Income Treory. Full Course.**
For Major and Honours students only.
Lectures: 3 hours per week for two terms.
- 306 Labour Economics. Full Course.**
History of the labour movement in Europe, Canada and the U.S.; labour problems; the economics of labour; collective bargaining; case studies; the social teaching of the Church; labour legislation in England, Canada and the United States.
Lectures: 3 hours per week for two terms.
- 308 Applied Statistics. Full Course.**
The application of statistical methods to economic problems including curve fitting, trend lines, seasonal variation, the measurement of cyclical fluctuations, correlation and index numbers.
Lectures: 3 hours per week for two terms.
- 310H History of Economic Thought. Full Course.**
A critical review of economic thought since Plato and Aristotle.
Lectures: 3 hours per week for two terms.
- 312 Comparative Economic Systems. Full Course. (not offered in 1964-65)**
The evolution of economic systems is discussed and evaluated in terms of modern economic theory, and from the point of view of economic efficiency and development.
Lectures: 3 hours per week for two terms.

313 Economic Fluctuations. Full Course. (not offered in 1964-65)

Statistical aspects of the business cycle, the Kitchin, Juglar and Kondratieff cycles; monetary, overinvestment, and underconsumption theories of the cycle; Schumpeter's theory; the influence of some strategic factors; an eclectic theory of the cycle; policy.

Lectures: 3 hours per week for two terms.

317H Mathematical Economics. Full Course. (not offered in 1964-65)

Application of elementary mathematical techniques to economic analysis. Topics covered will include the Calculus, Theory of Determinants, Linear Programming, etc., and their applications to selected topics in economic theory.

Lectures: 3 hours per week for two terms.

407 International Trade. Full Course. A. Vicas

Historical and economic background of international trade; the theory of international trade; balance of payments; international capital movements; foreign exchange; international commercial policies; international organization dealing with commercial policy.

Lectures: 3 hours per week for two terms.

411H Macro-Economic Analysis. Full Course. F. J. Hayes

A critical study of selected topics in Aggregative Economic Analysis, for Honours students only.

Lectures: 3 hours per week for two terms.

415 Public Finance. Full Course. L. Simcoe

A study of the principles and practices of public finance, with special reference to Canada.

Lectures: 3 hours per week for two terms.

416 Economic Policy. Full Course. L. Simcoe

This course is devoted to examining economic policy in such areas as: business, agriculture, commerce, income redistribution, transportation, social security.

Lectures: 3 hours per week for two terms.

Courses leading to an Honours B.A. in Economics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	ECONOMICS 305	ECONOMICS 411
ECONOMICS 102	English 101	ECONOMICS 308	ECONOMICS
French	ECONOMICS 204	ECONOMICS 317	Elective (1)
Mathematics 101	ECONOMICS 207	Philosophy 303	Philosophy 404
Theology 101	ECONOMICS 310	Theology	Theology
	French	Elective (1) from	Elective (1) from
	Philosophy 202	ECONOMICS or	ECONOMICS or
		History or	History or
		Mathematics or	Mathematics or
		Political Science	Political Science

Courses leading to a B.A. with a Major in Economics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	ECONOMICS 305 ECONOMICS 308	ECONOMICS Elective (1)
ECONOMICS 102	ECONOMICS 204	English	Philosophy 404
English 101	ECONOMICS 207	Philosophy 303	Philosophy Elective (1)
French	French	Theology	Electives (2) from ECONOMICS or History or Mathematics or Political Science
Mathematics 101	Philosophy 202		
Theology 101	Theology		

Courses leading to an Honours B. Comm. in Economics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Accounting 101	Business 201	ECONOMICS 305	ECONOMICS 411
ECONOMICS 102	ECONOMICS 204	ECONOMICS 308	ECONOMICS Elective (1)
English 101	ECONOMICS 207	ECONOMICS 317	Philosophy 404
French	ECONOMICS 310	Philosophy 303	Theology
Mathematics 101	French	Theology	Elective (1) from Accounting or Business or ECONOMICS or Mathematics or Political Science
Theology 101	Philosophy 202	Elective (1) from Accounting or Business or ECONOMICS or Mathematics or Political Science	Elective (1) from Accounting or Business or ECONOMICS or Business or Mathematics or Political Science

Courses leading to a B. Comm. with a Major in Economics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Accounting 101	Accounting 202	ECONOMICS 305	ECONOMICS Elective (1)
ECONOMICS 102	Business 201	ECONOMICS 308	Philosophy 404
English 101	ECONOMICS 204	English	Theology
French	ECONOMICS 207	Philosophy 303	Electives (2) from Accounting or Business or ECONOMICS or Mathematics or Political Science
Mathematics 101	French	Theology	
Theology 101	Philosophy 202		

engineering

G. W. Joly (Department Chairman) Associate Dean
F. Guadagni Associate Professor
D. J. McDougall Associate Professor
S. Yalcin Associate Professor
D. Hudson Assistant Professor
K. I. Krakow Assistant Professor
S. A. Neilon Lecturer
Rev. H. Wardell, S.J. Instructor

The Faculty of Engineering at this time offers the degree of Bachelor of Science, based on a four year program of studies.

The courses of the First Year and the Second Year constitute a common program for all students in them, while the courses of the Third and Fourth Years provide specialized work in Chemical, Civil, Electrical and Mechanical Engineering.

Because of the necessity of selecting a branch of Engineering for the Third Year, students during their Second Year are invited to consult with the Chairman of the Department about their choice.

promotion

For promotion, an overall average of at least 60% of the weighted marks is required, and at least 50% in each separate examination. A student who fails to achieve promotion and wishes to discuss the possibility of continuing his academic career in the Faculty of Engineering must apply **IN WRITING** to the Chairman, Engineering, before July 15.

admissions

The requirements for admission are as follows:

Canadian Applicants

to first year:

- For consideration for entry, an applicant must have:
 - achieved Junior Matriculation;
 - passed 11 papers in June, amongst which must be:

English (2 papers),	Physics,
Intermediate Algebra,	Chemistry;
Trigonometry,	
 - achieved an overall average of at least 70% in these 11 papers and a good second class mark in the compulsory ones listed in b) shown.
- Canadian applicants whose qualifications are different from those above should apply *in writing* to Loyola College for a review of them.

to second year:

- achieved Senior Matriculation;
 - passed 10 papers in June, amongst which must be:

English (2 papers),	Chemistry,
French (2 papers),	Analytical Geometry,
Physics,	Calculus;
 - achieved an overall average of at least 70% in the 10 papers.
- Canadian applicants whose qualifications are different from those above should apply *in writing* to Loyola College for a review of them.

applicants from abroad

to first and second year:

Applicants who consider that their qualifications are equivalent to those specified for Canadian students are invited to submit them to Loyola College for review.

102 Engineering Problems. Half Course.

Staff

This course is the complement of the lectures in the Mathematics of First Year and seeks to unite the theory and practice of Mathematics as related to Engineering. Problems are set up and solved by the student himself.

Lectures: 2 hours problems per week for two terms.

120 Elements of Mechanical Drawing. Half Course.

H. Wardell

Selection and use of drafting instruments and materials; lettering, conventional practices and symbols, sectional views and methods of reproduction; orthographic projection auxiliary and oblique views, dimensioning, sectioning.

Lab: 3 hours per week for two terms.

Text: French, *Engineering Drawing*. McGraw-Hill.

- 160 Elements of Engineering Practice. Half Course.** Staff
A series of lectures designed to acquaint the First Year students with the basic concepts, practice and history of Engineering.
- 202 Engineering Problems. Half Course.** Staff
This course is the complement of the lectures in the Mathematics of Second Year and seeks to unite the theory and practice of Mathematics as related to Engineering. Problems are set up and solved by the student himself.
Lectures: 2 hours problems per week for two terms.
- 210 Statics and Dynamics. Full Course.** F. Guadagni
Equilibrium of concurrent and non-concurrent forces; simple beams and framework with stress analysis by the methods of sections. Elementary dynamics of particles; rectilinear motion; projectiles; the inclined plane and pulleys; impulse, impact and momentum of streams of particles; work energy; centre of gravity; friction.
Lectures: 2 hours per week for two terms, and 2 hours problems per week for second term.
Text: Mimeographed problems.
Reference Books: Higdon and Stiles, *Engineering Mechanics*. Prentice-Hall. Timoshenko and Young, *Engineering Mechanics*. McGraw-Hill.
- 220 Mechanical Drawing. Full Course.** H. Wardell
Geometrical construction of ellipses, hyperbolas, cycloids, involutes, etc. Pictorial drawings including isometric, oblique, common machines elements: screws, welding, piping, gears, pulleys and structural shapes; free-hand sketching, work and assembly drawings.
Lectures: 1 hour per week for two terms.
Lab: 2 hours per week for two terms.
Text: French, *Engineering Drawing*. McGraw-Hill.
- 221 Descriptive Geometry. Half Course.** F. Guadagni
Theory of orthographic projection, planes and their traces, oblique planes solution, dihedral angles and practical mining problems involving principles covered in the course.
Lectures: 1 hour per week for two terms.
Lab: 2 hours per week for two terms.
Text: Mimeographed notes.
- 230 Elements of Surveying. Half Course.** S. Yalcin
Kinds of surveying operations: the chain, the tape and their use. The engineer's level; differential and profile leveling. The engineer's compass, its use; local attraction in magnetic surveys. The transit and transit traverses; stadia: circular curves; calculation of areas by the method of total coordinates.
Lectures: 2 hours per week for second term.
Reference Books: Davis and Foote, *Surveying*. McGraw-Hill. Breed, *Surveying*. Wiley.

- 241 Materials Science I. Half Course.** S. Yalcin
A systematic approach to the study of properties and behaviour of engineering materials including, the fundamental properties of materials, metallic phases, multiphase materials, structural effects on properties, stability under service stresses; thermal, electrical, chemical properties and corrosion; organic and non-metallic materials.
Lectures: 2 hours per week for two terms.
- 260 Engineering reports. Half Course.** D.J. McDougall
A course for Second Year Science and Engineering Students.
Lectures: 2 hours per week for two terms.
- 300 Engineering Mathematics. Half Course.** F. Guadagni
A selection of exercises and problems requiring analysis and the application of accepted or derived methods of solution.
Lectures: 1 hour per week for two terms.
Lab: 2 hours per week for two terms.
Text: Mimeographed problems.
- 301 Engineering Mathematics. Half Course.** F. Guadagni
Application of physical and chemical principles to some fundamental problems in Chemical Engineering.
Lectures: 3 hours per week for two terms.
- 310 Mechanics. Full Course.** F. Guadagni
Shearing force and bending moments; kinematics, dynamics and statics of systems of particles and of rigid bodies. Variable rectilinear and curvilinear motion. Simple harmonic motion; moments of inertia and translation and rotation of rigid bodies. Impact. Conservation of angular momentum. Gyroscopes.
Lectures: 3 hours per week for two terms.
Text: Mimeographed problems.
Reference Books: Higdon and Stiles, *Engineering Mechanics*. Prentice-Hall. Timoshenko and Young, *Engineering Mechanics*. McGraw-Hill.
- 311 Mechanics. Full Course.** F. Guadagni
Shearing force and bending moment. Kinematics, dynamics and statics of systems of particles and of rigid bodies. Variable rectilinear and curvilinear motion. Simple harmonic motion. Moments of inertia and center of pressure. Engineering 311 and 410 are together equivalent to Engineering 310.
Lectures: 2 hours per week for two terms.
Text: Mimeographed problems.
Reference Books: Higdon and Stiles, *Engineering Mechanics*. Prentice-Hall. Timoshenko and Young, *Engineering Mechanics*. McGraw-Hill.
- 312 Mechanics of Machines. Full Course.** K. I. Krakow
Constrained motion; instant centers; controdes; analysis and classification of simple mechanisms, including the quadric-crank, the slider-crank and wheel trains; design of involute gear teeth; belts and flexible couplings; cam design.
Lectures: 2 hours per week for second term.
Lab: 3 hours per week for second term.

- 320 Machine Drawing. Half Course.** K. I. Krakow
Engineering drafting room procedure and technique in the production of working drawings of machinery, correlation between processes and design.
Lab: 3 hours per week for first term.
Text: French, *Engineering Drawing*. McGraw-Hill.
- 330 Surveying. Half Course.** S. Yalcin
Adjustment of level and transit; theory and use of the polar planimeter; double meridian distance method of calculating areas; omitted measurements and partition of land; cross section and borrow pits; circular curves and spirals; vertical curves.
Lectures: 2 hours per week for first term.
Reference Books: Davis and Foote, *Surveying*. McGraw-Hill. Breed, *Surveying*. Wiley.
- 331 Surveying Problems. Half Course.** S. Yalcin
Earthworks calculations using the polar planimeter.
Lab: 3 hours per week for first term.
- 332 Elementary Surveying Field Work.** S. Yalcin
Practice in chaining and taping; use of the level and of the transit; complete survey of a tract of land.
Summer School: 4 weeks in April and May, after Engineering 230.
- 341 Strength of Materials. Full Course.** G. W. Joly
Elastic theory of matter; axial, thermal and bending stresses; combined stress; tension; deflection of beams by differential equation of elastic line, moment area, superposition and conjugate beam methods; statically indeterminate beams; energy of strain; introduction of photostress analysis and theory of models.
Lectures: 2 hours per week for two terms.
Lab: 3 hours per week for second term (combined with Materials Science 346).
Reference Books: Timoshenko and Young, *Elements of Strength of Materials*. Van Nostrand.
- 342 Mechanical Engineering. Full Course.** K. I. Krakow
Thermodynamics of mechanical engineering processes; steam power; I-C engines; compressors; fundamentals of refrigeration and psychrometrics; heat transfer; fluid mechanics.
Lectures: 2 hours per week for two terms.
Reference Books: Ebaugh, *Engineering Thermodynamics*. Van Nostrand. Severn, Miles and Degler, *Steam, Air and Gas Power*. Wiley.
- 343 Mechanical Engineering Laboratory. Half Course.** K. I. Krakow
Measurement of technical performance of machines; boiler; I-C engines; steam engines; gas and steam turbines; compressors; fans; fuel analysis; heat transfer.
Lab: 3 hours per week for two terms.

- 344 Circuit Analysis. Full Course.** D. Hudson
The fundamentals of the analysis of linear circuits to steady, time varying, periodic and non-periodic circuits and voltages; general analysis; network theorems; active network analysis; time frequency domain relationships; polyphase circuits; Fourier series, Laplace transforms.
Lectures: 2 hours per week for two terms.
Lab: 3 hours per week for two terms.
Reference Book: Walsh and Miller, *Electric Circuits*. McGraw-Hill.
- 345 Circuit Analysis. Half Course.** D. Hudson
Modified form of Engineering 344, given in one term.
Lectures: 2 hours per week for second term.
Lab: 3 hours per week for second term.
Reference Book: Walsh and Miller, *Electric Circuits*. McGraw-Hill.
- 346 Materials Science II. Full Course.** D. Hudson, K. I. Krakow, H. Wardell
A theoretical and experimental study of metallic and non-metallic materials, their properties and processes used to control and alter their properties, their mechanical behaviour and experimental techniques used in investigating their behaviour, and the relation between mechanical behaviour and the physical and chemical properties of materials.
Lectures: 1 hour per week for two terms.
Lab: 3 hours per week for two terms.
- 360 Technical Report.**
Students entering the final year of the Engineering course must submit a technical report. The most suitable subject for the report is a topic drawn from the experience of the student during his summer work, but a similar topic connected with any engineering, scientific or industrial work with which he is familiar is acceptable. The report should be approximately 2,000 words in length and must be handed in not later than October 3rd.
- 361 Engineering Practice. Half Course.**
- 410 Mechanics. Half Course.** F. Guadagni
Translation and rotation of rigid bodies. Impact. Conservation of angular momentum; Gyroscopes. Engineering 311 and 410 are together equivalent to Engineering 310.
Lectures: 2 hours per week for first term.
Text: Mimeographed problems.
Reference Books: Higdon and Stiles, *Engineering Mechanics*. Prentice-Hall. Timoshenko and Young, *Engineering Mechanics*. McGraw-Hill.
- 430 Surveying Field School (McGill Engineering 377).**
Preliminary railway or highway survey with transit, profile and topographic parties; plane table, hand level and stadia; spiral curves; cross sections; simple triangulation networks; reciprocal

Third year engineering — Civil, Electrical, Mechanical

Course	Course Number	Weighted Mark	Lecture hours per week		Lab. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
ENGINEERING	220	100	1	1	2	2
ENGINEERING	230	50	—	2	—	—
ENGINEERING	241	50	2	2	—	—
ENGINEERING	311	100	2	2	—	—
ENGINEERING	332	50	—	—	—	—
* French	—	100	3	3	—	—
Geotechnical Science	301	100	2	2	2	2
Mathematics	** 309	50	2	2	—	—
Philosophy	303	100	3	3	—	—
Physics	304	50	—	3	—	—
Physics	401	50	3	—	—	—
Theology	—	100	2	2	—	—
TOTAL:		900	20	22	4	4

* For 1964-65 only.

** New course will be offered in 1965-66.

Fourth year engineering — Chemical

Course	Course Number	Weighted Mark	Lecture hours per week		Lab. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
Chemistry	221	100	3	3	—	—
Chemistry Lab.	222	50	—	—	3	3
Chemistry	313	100	1	—	6	—
ENGINEERING	301	50	1	1	—	—
ENGINEERING	345	50	—	2	—	3
ENGINEERING	346	100	1	1	3	3
ENGINEERING	360	100	—	—	—	—
ENGINEERING	410	50	2	—	—	—
English	—	50	3	3	—	—
Mathematics	* 308	50	2	2	—	—
Mathematics	309	50	2	2	—	—
Philosophy	404	100	3	3	—	—
Theology	—	100	2	2	—	—
TOTAL:		950	20	19	12	9

* New course will be offered in 1965-66.

Fourth year engineering — Civil

Course	Course Number	Weighted Mark	Lecture hours per week		Lab. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
ENGINEERING	312	50	—	2	—	3
ENGINEERING	330	50	2	—	—	—
ENGINEERING	331	50	—	—	3	—
ENGINEERING	341	100	2	2	—	—
ENGINEERING	345	50	—	2	—	3
ENGINEERING	346	100	1	1	3	3
ENGINEERING	360	100	—	—	—	—
ENGINEERING	410	50	2	—	—	—
ENGINEERING	430	50	—	—	—	—
English	—	50	3	3	—	—
Geotechnical Science	401	50	2	—	2	—
Geotechnical Science	402	50	—	2	—	2
Mathematics	* 308	50	2	2	—	—
Mathematics	309	50	2	2	—	—
Philosophy	404	100	3	3	—	—
Theology	—	100	2	2	—	—
TOTAL:		1050	21	21	8	11

* New course will be offered in 1965-66.

Fourth year engineering — Electrical

Course	Course Number	Weighted Mark	Lecture hours per week		Lab. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
ENGINEERING	341	100	2	2	—	—
ENGINEERING	344	100	2	2	3	3
ENGINEERING	346	100	1	1	3	3
ENGINEERING	360	100	—	—	—	—
ENGINEERING	410	50	2	—	—	—
English	—	50	3	3	—	—
Mathematics	* 308	50	2	2	—	—
Mathematics	309	50	2	2	—	—
Philosophy	404	100	3	3	—	—
Physics	406	100	3	3	—	—
Theology	—	100	2	2	—	—
TOTAL:		900	22	20	6	6

* New course will be offered in 1965-66.

Fourth year engineering — Mechanical

Course	Course Number	Weighted Mark	Lecture hours per week		Lab. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
ENGINEERING	300	50	1	1	2	2
ENGINEERING	312	50	—	2	—	2
ENGINEERING	320	50	—	—	3	—
ENGINEERING	341	100	2	2	—	—
ENGINEERING	345	50	—	2	—	3
ENGINEERING	346	100	1	1	3	3
ENGINEERING	360	100	—	—	—	—
ENGINEERING	410	50	2	—	—	—
English	—	50	3	3	—	—
Mathematics	* 308	50	2	2	—	—
Mathematics	309	50	2	2	—	—
Philosophy	404	100	3	3	—	—
Theology	—	100	2	2	—	—
TOTAL:		900	18	20	8	10

* New course will be offered in 1965-66.

english

Rev. G. MacGuigan, S.J.	A. G. Hooper	Professor
(Department Chairman)	(Department Chairman)	Associate Professor
M. Blonar	J. Buell	Associate Professor
J. T. Rooney	R. S. Wareham	Assistant Professor
K. Waters		Assistant Professor

101 First Year. Full Course.

M. Blonar, R. S. Wareham and Instructors

English literature and composition, with private tutorials.

Texts: Selected paperbacks.

Lectures: 3 hours per week for two terms.

110H Chaucer. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

120H Spenser and his Background. Full Course. R. S. Wareham

Spenser's works, in particular *The Shepheardes Calendar* and *The Faerie Queene*: the background of Elizabethan politics, religion, ethics, psychology, and literary theory; the influence of Courtly Love, Humanism, and Neoplatonism; the traditions of pastoral, epic, romance, and allegory.

Lectures: 3 hours per week for two terms.

130H Shakespeare. Full Course. J. Buell

The comedies, tragedies and historical plays of Shakespeare, with due attention given to his times, his development, and the body of Shakespearean criticism.

Lectures: 3 hours per week for two terms.

140H Milton and the Seventeenth Century. Full Course.

A. G. Hooper

Lectures: 3 hours per week for two terms.

150H Dryden and Pope. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

160H Swift and Johnson. Full Course. M. Blonar

A study of *satire* and Swift's major and minor works; neo-classicism, Boswell's *Life of Johnson* and selections from Johnson's works.

Lectures: 3 hours per week for two terms.

220 Medieval and Renaissance Literature. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

240 Restoration and Eighteenth-Century Literature. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

- 250H Nineteenth-Century Poetry. Full Course.** J. Rooney
Lectures: 3 hours per week for two terms.
- 260H Nineteenth-Century Thought. Full Course. (not offered in 1964-65)**
A critical study of key political, moral, spiritual and literary concepts in selected works of Jane Austen, Wordsworth, Mill, Newman, Arnold, George Eliot and others.
Lectures: 3 hours per week for two terms.
- 270 Nineteenth-Century Literature. Full Course.** J. Rooney
G. MacGuigan
Lectures: 3 hours per week for two terms.
- 280H Modern Literature. Full Course.** K. Waters
Lectures: 3 hours per week for two terms.
- 290 Modern Literature. Full Course.** K. Waters
Lectures: 3 hours per week for two terms.
- 320 Drama in the Western World. Full Course.** J. Buell
Lectures: 3 hours per week for two terms.
- 330 Elizabethan and Jacobean Drama. Full Course.** A. G. Hooper
Lectures: 3 hours per week for two terms.
- 340H The Novel. Full Course. (not offered in 1964-65)**
Lectures: 3 hours per week for two terms.
- 350 Modern Fictional Forms. Full Course. (not offered in 1964-65)**
Lectures: 3 hours per week for two terms.
- 360H Poetry. Full Course.** K. Waters
Lectures: 3 hours per week for two terms.
- 370 Literature, Ideas and Myths. Full Course. (not offered in 1964-65)**
A course for general Arts students.
Texts: *The Epic of Gilgamesh*. *The Prophecy of Isaiah*. *The Republic of Plato*. Virgil, *The Aeneid*. Augustine, *The City of God*. Boethius, *The Consolation of Philosophy*. *The Romance of Tristan and Iseult*. Shakespeare, *King Lear*. Marvell's poetry. Swift, *Gulliver's Travels*. Dostoyevsky, *Crime and Punishment*. *The Communist Manifesto*.
Lectures: 3 hours per week for two terms.

- 380 Literary Genres. Full Course. (not offered in 1964-65)**
An attempt to arrive at definitions of some of the *kinds* of literature, such as *comedy* and *tragedy*, by means of a comparative study of a large number of representative works.
Lectures: 3 hours per week for two terms.
- 410H The English Language. Half Course. (not offered in 1964-65)**
Lectures: 2 hours per week for one term.
- 420H Anglo-Saxon Language and Literature. Half Course. (not offered in 1964-65)**
Lectures: 2 hours per week for two terms.
- 430H Middle English Language. Half Course.** A. G. Hooper
Lectures: 3 hours per week for one term.
- 440 Advanced Prose Composition. Full Course.** G. MacGuigan
A theoretical and practical study of prose style to make the student familiar with and competent in the use of the main prose traditions. A reading of treatises on style from Aristotle and Longinus to the present time is required.
Lectures: 3 hours per week for two terms.
Texts: Aristotle, *Rhetoric*. Weaver, *The Ethics of Rhetoric*. Auerback, *Mimesis*. Whately, *Elements of Rhetoric*. Donnelly, *Persuasive Speech*. Read, *English Prose Style*. Whitehall, *Structural Elements of English*. Other selections to be announced.
- 510 Principles and Practice of Literature. Full Course. (not offered in 1964-65)**
A course designed to acquaint the student with the nature of literature, its various genres, its levels, and basic critical positions and problems.
Lectures: 3 hours per week for two terms.
Texts: including Aristotle, *Poetics*. Blair and Gerber, *Better Reading*. vol. 2. Daiches, *Critical Approaches to Literature*.
- 520H Practical Criticism. Full Course** A. G. Hooper
Lectures: 3 hours per week for two terms.
- 530H Criticism. Full Course. (not offered in 1964-65)**
A study of the major theories of literature from Aristotle to the present. The course presumes wide reading in literature and some familiarity with the history of philosophy.
Lectures: 3 hours per week for two terms.
Texts: including Bates, *Criticism: The Major Texts*. Frye, *Anatomy of Criticism*. Lonergan, *Insight*.
- 610 Canadian Literature. Half Course. (not offered in 1964-65)**
Lectures: 3 hours per week for one term.

620 American Literature. Half Course. (not offered in 1964-65)

To qualify for the Honours English B.A., honours standing must be maintained in the six obligatory English courses, in the two English elective courses and in two of the following: Classics 201, Philosophy 202, Philosophy 303 and the Philosophy half-course elective. In other subjects the required pass standing must be maintained.

Lectures: 3 hours per week for one term.

Courses leading to an Honours B.A. in English.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	ENGLISH 130	ENGLISH Electives (3) from 120, 130,
ENGLISH 101	ENGLISH 360	ENGLISH Elective	140, 160, 250
French	ENGLISH 520	(1) from 120, 140,	Philosophy 404
History 101	French	160	Philosophy
Mathematics 101	Philosophy 202	Philosophy 303	Elective (1/2)
Theology 101	Theology	Theology	

Courses leading to a B.A. with a Major in English.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	ENGLISH Electives (2)	ENGLISH Electives (2)
ENGLISH 101	ENGLISH 330	Philosophy 303	Philosophy 404
French	ENGLISH Elective (1)	Theology	Philosophy
History 101	French	Science Elective (1)	Elective (1)
Mathematics 101	Philosophy 202		Social Science
Theology 101	Theology		Elective (1)
	Elective (1)		

geotechnical science

D. J. McDougall (Department Chairman) Associate Professor
S. Yalcin Associate Professor
H. J. Bergmann Lecturer
P. J. Denison Lecturer

- 301 General Geology. Full Course.** D. J. McDougall
Elements of mineralogy, petrology, soil mechanics, structural geology, historical geology and geomorphology. Emphasis is laid on the relationship of geology to engineering practice. Mineral, rock and soil specimens, topographic and geologic maps, and air photos are studied in the laboratory. During October and November several field trips are made to points of interest in and near Montreal.

Lectures: 2 hours per week for two terms.

Lab: 2 hours per week for two terms.

Text: Dapples, *Basic Geology for Science and Engineering*. Wiley.

302 Mineralogy. Full Course.

Crystallography, physical mineralogy, chemical mineralogy and the descriptive mineralogy of some 150 important rock forming and economic minerals. Occurrence, association and uses of minerals. In the laboratory, crystal forms are studied and minerals

are identified by the determination of their physical characteristics and by semi-qualitative chemical tests.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Berry and Mason, *Mineralogy*. Freeman.

303 Applied Geophysics. Half Course. H. J. Bergmann

An introduction to geophysical methods of prospecting and of investigating subsurface structures. The theories, uses and limitations of various magnetic, electrical, gravitational and seismic methods are explained and compared. The practical operation of the instruments is reviewed and actual field results are obtained and analysed.

Prerequisite: Geotechnical Science 301 and Physics 205.

Lectures: 2 hours per week for one term.

Texts: Eve and Keys, *Applied Geophysics*. Cambridge. Dobrin, *Introduction to Geophysical Prospecting*. McGraw-Hill.

304 Field Geophysics. Half Course.

Field work involving small scale seismic, magnetic, gravimetric and electrical surveys.

Prerequisite: Geotechnical Science 303.

Lectures: 2 hours per week for second term.

Field Work: 2 weeks in May at the McGill Geophysics Field School.

305 Structural Geology. Full Course.

A survey of geological structures and their origins. Elements of structural interpretation. In the laboratory, graphical methods are used for the analysis and interpretation of practical problems.

Prerequisite: Geotechnical Science 301, 306.

Lectures: 2 hours per week for two terms.

Lab: 2 hours per week for two terms.

Text: Billings, *Structural Geology*. 2nd ed., Prentice-Hall.

306 Geotechnical Methods. Half Course. D. J. McDougall

A survey of field and laboratory methods and techniques which is designed as an introduction to the philosophy and practice of geotechnical investigations. Interested students will take this course concurrently with the second half of Geotechnical Science 301.

Lectures: 2 hours per week for second term.

Lab: 2 hours per week for second term.

307 Applied Meteorology. Full Course. P. Denison

The elements of meteorology with emphasis on a number of applications. Engineering students (except Civil) may substitute this course for Geotechnical Science 301.

Lectures: 2 hours per week for two terms.

Lab: Class project on some phase of meteorological investigation.

401 Geomorphology. Half Course. D. J. McDougall
An advanced course in the study of landforms produced by the processes of erosion and deposition by water, wind, glaciation and earth movements. The interrelationship of geologic processes, materials and structures, soil types, climatic conditions, etc., in the development of topographic forms is emphasised. Suites of maps and air photos plus one full day field trip are used to illustrate the lectures.

Prerequisite: Geology 301.

Lectures: 2 hours per week for first term.

Lab: 2 hours per week for first term.

Text: Thornbury, *Principles of Geomorphology*. Wiley.

402 Engineering Geology. Half Course. S. Yalcin
Engineering properties of rocks. Ground water. The formation and mechanics of soils including structure, gradation, sedimentation, permeability, compressibility and shearing strength. Application of soil characteristics to typical geotechnical problems in bearing capacity, settlement and lateral earth pressure. Crustal movements and stability of slopes. Frost action in regolith. Laboratory work for experimental determination of above characteristics.

Prerequisite: Geotechnical Science 301.

Lectures: 2 hours per week for second term.

Lab: 2 hours per week for second term.

Text: Krynnine and Judd, *Principles of Engineering Geology and Geotechnics*. McGraw-Hill.

403 Field Geology (McGill Geology 231c). Half Course.
Surface and underground field mapping methods. Preparation of geological maps, sections and reports from field notes, diagrams, air photos, etc.

Prerequisite: Geotechnical Science 301, Engineering 201, 303.

Field Work: 2 weeks in May at the McGill Field Geology School.

Texts: Lahee, *Field Geology*. 5th ed., McGraw-Hill. McKinstrey, *Mining Geology*. Prentice-Hall.

404 Optical Crystallography. Half Course.
The optical properties of non-opaque crystalline substance under the polarizing microscope. In the laboratory, mineral powders are identified by their optical characteristics and by the determination of their refractive indices.

Prerequisite: Geotechnical Science 302.

Lectures: 2 hours per week for one term.

Lab: 3 hours per week for one term.

Text: Wahlstrom, *Optical Crystallography*. Wiley.

405 Geology and Mineral Resources of Canada. Half Course. D. J. McDougall
The geology and mineral resources of Canada are described in relationship to the major geomorphic subdivisions. Reading assignments and colloquium are used to provide illustrative material.

Lectures: 2 hours per week for one term.

Colloquium: 1 to 3 hours per week for one term.

Text: *Geology and Economic Minerals of Canada*. 4th ed., Econ. Geol. Series, No. 1 of the *Geological Survey of Canada*.

406 Petrology. Full Course.
A systematic survey of the origin, distribution, classification and identification of the common igneous, sedimentary, and metamorphic rocks. In the laboratory megascopic and microscopic properties are studied, using field techniques and the polarizing microscope.

Prerequisite: Geotechnical Science 302, 306.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

Texts: Tyrrell, *The Principle of Petrology*. Methuen. Moorhouse, *The Study of Rocks in Thin Section*. Harper.

407 Economic Mineral Deposits. Full Course. D. J. McDougall
The origins, types of occurrence and classification of deposits of important metallic and non-metallic minerals of economic importance.

Prerequisite: Geotechnical Science 302, 305, 406.

Lectures: 2 hours per week for two terms.

Lab: 3 hours per week for two terms.

Text: Bateman, *Economic Mineral Deposits*. Wiley.

408 Geotechnical Laboratory. Full Course. Staff

409 Applied Sedimentation. Half Course. S. Yalcin
The formation and investigation of consolidated and unconsolidated sedimentary rocks. Particular emphasis is placed on engineering aspects.

Lectures: 2 hours per week for one term.

Lab: 3 hours per week for one term.

Courses leading to a B.Sc. with a Major in Geotechnical Science.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Chemistry 211	Chemistry 231	Engineering 240
Chemistry 102	Chemistry 212	Engineering 210	Engineering 341
Engineering 120	Engineering 260	English	(Lab only)
English 101	French	GEOTECH. Sc. 303	GEOTECH.Sc. 401
French	GEOTECH. Sc. 301	GEOTECH. Sc. 304	GEOTECH.Sc. 402
Mathematics 106	GEOTECH. Sc. 302	GEOTECH. Sc. 305	GEOTECH.Sc. 403
Mathematics 107- and 108 or 205	GEOTECH. Sc. 306	GEOTECH. Sc. 404	GEOTECH.Sc. 405
Physics 101	Mathematics 205	Philosophy 303	GEOTECH.Sc. 406
Theology 101	Philosophy 202	Physics 205	GEOTECH.Sc. 407
	Theology	Theology	GEOTECH.Sc. 408
			Philosophy 404

history

F. G. W. Adams (Department Chairman)
 Rev. C. B. O'Keefe, S.J.
 D. C. Savage
 J. Banfield
 R. T. Coolidge
 J. F. McGovern
 D. J. O'Brien
 R. E. Ruigh
 J. T. Copp

Associate Professor
 Associate Professor
 Associate Professor
 Assistant Professor
 Assistant Professor
 Assistant Professor
 Assistant Professor
 Assistant Professor
 Lecturer

101 The Heritage of Western Civilization, 1050-1815. Full Course.

J. F. McGovern, R. E. Ruigh
 A survey of the institutional and cultural background of modern Europe and America.

Lectures and Seminar: 3 hours per week for two terms.

201 History of Canada. Full Course. J. T. Copp

A general survey of Canadian history from the establishment of New France to the Second World War, with special emphasis on 19th-century political and constitutional development.

Lectures: 3 hours per week for two terms.

202 History of Modern Europe, 1760-1919. Full Course.

F. G. W. Adams

A general survey of the main social, economic, political and cultural developments in Europe from the Age of the Enlightenment to the Treaty of Versailles.

Lectures: 3 hours per week for two terms.

203 Introduction to the History of Africa. Full Course. (not offered in 1964-65)

D. C. Savage

Africa before European colonization; colonial policies of the European powers; the rise of nationalism. It is recommended that students take Political Science 235 instead.

Lectures: 3 hours per week for two terms.

204 History of Ancient Greece and Rome. Full Course.

D. C. Scavone

This course is also listed as Classics 330.

Lectures: 3 hours per week for two terms.

301 History of England. Full Course. R. E. Ruigh

A general survey of English history from the Anglo-Saxons to the present.

Lectures: 3 hours per week for two terms.

302 History of the United States. Full Course. D. J. O'Brien

A survey of American history from colonial times to the present.

Lectures: 3 hours per week for two terms.

303 History of the British Empire and Commonwealth. Full Course. (not offered in 1964-65)

A survey of the development of the British Empire and its transformation into the Commonwealth of Nations. It is recommended that students take Political Science 211 instead.

304 The World since 1914. Full Course. F. G. W. Adams

A survey of international politics from 1914 to the present, with special emphasis on European development.

Lectures: 3 hours per week for two terms.

305 History of Medieval Europe. Full Course. R. T. Coolidge

A survey of the two main events of medieval history, and of the institutions and peoples which have helped to shape western civilization.

Lectures: 3 hours per week for two terms.

311H Renaissance and Reformation. Full Course. (not offered in 1964-65)

312H The Age of the Enlightenment. Full Course. (not offered in 1964-65)

313H History of Medieval England. Full Course. (not offered in 1964-65)

The social, political and economic development of England during the Medieval period.

314H History of Tudor-Stuart England. Full Course. (not offered in 1964-65)

A study of the rise of the new monarchy and the economic, political and religious developments of the period.

315H West Africa in the Colonial Era. Full Course. (not offered in 1964-65)

A study of West African developments, emphasizing the structure and effect of French and British rule and the origins of nationalism.

316H Medieval France. Full Course. (not offered in 1964-65)

A study of political, social, economic and cultural developments in France from the first settlements of the Germanic tribes in Gaul to the end of the Capetian dynasty (1328).

317H The French Revolution and Napoleon. Full Course.

F. G. W. Adams

An examination of political, socio-economic and cultural developments in France and Western Europe from 1789 to 1815. Students will be required to read selections in French.

Seminar: 2 hours per week for two terms.

318H History of East, Central and South Africa. Full Course.

J. Banfield

Emphasis will be placed on the problem raised by white settlement.

Seminar: 2 hours per week for two terms.

401 History of Medieval Italy. Full Course. J. F. McGovern

A political and economic study of Italy from the barbarian invasions to the rise of the Renaissance despots.

Lectures: 3 hours per week for two terms.

402 The Middle East. Full Course.**H. Habib**

This course is also listed as Political Science 217. A brief historical and political survey of the modern political institutions of the Middle Eastern states.

Lectures: 3 hours per week for two terms.

403 Modern Catholic Social and Political Thought. Full Course.**D. J. O'Brien**

A study of the attitude of the Catholic Church and of individual Catholic thinkers toward the social and political problems of 19th and 20th century Europe and America.

Lectures: 3 hours per week for two terms.

411H Medieval Learning and Education. Full Course.**R. T. Coolidge**

A study of developments in the teaching and learning of the Seven Arts in the Middle Ages, and in the study of Religion, Law and Medicine, with emphasis on the period from the beginning of the Carolingian Renaissance to the rise of universities. Students will be required to read selections in French.

412H British Political Parties, 1815-1950. Full Course. (not offered in 1964-65)

Emphasis is placed on the structure of politics and on the role of political parties in modern industrial England.

413H English Constitutional History. Full Course. (not offered in 1964-65)

The theory and practice of the English Constitution from Magna Charta to the present.

414H Seventeenth-Century Europe. Full Course. (not offered in 1964-65)

A study of political, social and economic developments in Europe, with special emphasis on France.

415H The Era of the Governing Class: English History 1660-1815. Full Course.

Emphasis on the effects of parliamentary sovereignty, the development of Cabinet responsibility, and the genesis of colonialism and industrialism.

Seminar: 2 hours per week for two terms.

417H Medieval Economic History. Full Course. J.F. McGovern

An examination of agriculture, manufacturing, trade and the development of towns and money in the medieval period.

Seminar: 2 hours per week for two terms.

418H American Reform Movements, 1890-1945. Full Course.**D. J. O'Brien**

A study of reform movements in the United States from Populism to the New Deal.

Seminar: 2 hours per week for two terms.

419H Reading Course: French Canada. Full Course.

An Honours B.A. in History is available to students. Those intending to qualify for this degree should take History 101 in their First Year. During their four-year programme they must take at least three General History courses and six Honours History courses. Five of their history courses must be taken in one of the following areas of concentration: European, North American, British or Non-European history. There is a comprehensive oral examination for all Honours History students towards the end of their fourth year.

Courses leading to an Honours B.A. in History.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	French	HISTORY	HISTORY
English 101	HISTORY Elective (3)	H*Electives (3)	H*Electives (3)
French	Philosophy 202	Philosophy 303	Philosophy 404
Mathematics 101	Theology	Philosophy Elective (1)	
Theology 101		Theology	
Elective (1)			

* an Elective from the Honours History courses being offered.

The Department of History also prepares students for the B.A. with a Major in History. Candidates for this degree should take History 101 in their First Year. They must also take five General History courses after their First Year.

Courses leading to a B.A. with a Major in History.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	HISTORY Electives (2) from 301, 302, 303, 304, 305	HISTORY Electives (2) from 401, 402, 403
English 101	English	Philosophy 303	Philosophy 404
French	French	Theology	Philosophy Elective (1)
Mathematics 101	HISTORY 201 or 202 or 203 or 204	Elective (1)	Elective (1)
Theology 101	Philosophy 202		
Elective (1)	Theology		

mathematics

Rev. E. O'Connor, S.J.	(Department Chairman)	Professor
I. Benjamin		Associate Professor
A. Prillo		Associate Professor
K. N. Majumdar		Assistant Professor
E. Batiuk		Lecturer
D. A. Bonyun		Lecturer
C. G. Hewson		Lecturer
Joseph C. Soric		Lecturer
T. Srivastava		Lecturer

101 Algebra and Trigonometry. Full Course.**Staff**

Algebra and Graphs: linear and quadratic functions and their graphs; ratio and proportion; the progressions; permutations and combinations; binomial theorem; mathematics of investment.

Plane Trigonometry and Analytic Geometry: the trigonometric functions and solution of right-angled triangles; measurement of angles; identical relationships among the functions; trigonometric equations; graphs of the trigonometric functions; solution of triangles; logarithms; discussion of straight line and circle.

Lectures: 3 hours per week for two terms.

106 Analytic Geometry. Half Course.

An elementary study of the straight line and circle, with an introduction to conic sections.

Lectures: 3 hours per week for one term.

Text: Smith, Salkover and Justice, *Analytic Geometry*. Wiley.

107 Plane Trigonometry. Half Course.

The trigonometric functions and solution of right-angled triangles; measurement of angles; identical relations among the functions and trigonometric equations; functions of compound angles; transformations of products and sums; logarithms; solution of triangles; graphs of the trigonometric functions; general solutions of trigonometric equations and inverse functions.

Lectures: 3 hours per week for one term.

Text: Hall and Knight, *Elementary Trigonometry*. Macmillan.

108 Intermediate Algebra. Half Course.

Linear and quadratic functions; polynomials and algebraic equations; rational functions; ratio and proportion; systems of equations; series of numbers; the progressions; permutations and combinations; mathematical induction; the binomial theorem; approximations; mathematics of investment.

Lectures: 3 hours per week for one term.

Text: Rosenbach and Whitman, *College Algebra*. Ginn.

109 Senior Algebra. Half Course.

Functions; inequalities and their solutions; complex numbers; theory of equations; logarithms; determinants; partial fractions; infinite series.

Lectures: 3 hours per week for one term.

Text: Rosenbach and Whitman, *College Algebra*. Ginn.

110 Analytical Geometry and Calculus. Full Course.

A first course in Analytical Geometry and Calculus.

Lectures: 3 hours per week for two terms.

202 Elementary Statistics. Half Course.

Frequency distributions and descriptive measures; probability; sampling; estimation of confidence intervals; testing hypothesis; tests for randomness; linear relations; correlations.

Lectures: 3 hours per week for one term.

Text: Freund, *Modern Elementary Statistics*. Prentice-Hall.

203 Theory of Interest. Half Course.

Simple and compound interest; discounts; annuities certain; sinking funds; bonds; elementary interpolation.

Lectures: 3 hours per week for one term.

Text: Simpson, Pirenian and Crenshaw, *Mathematics of Finance*. Prentice-Hall.

204 Calculus. Full Course.

An introductory course aiming to cover the ordinary techniques and applications of calculus. It includes the following topics: functions; limits; graphs; slope; differentiation and integration of polynomial, algebraic, trigonometric, exponential, and logarithmic functions; applications; definite integrals; partial derivative; multiple integrals; tables of integration.

Lectures: 3 hours per week for two terms.

Text: Middlemiss, *Differential and Integral Calculus*. McGraw-Hill.

205 Calculus. Full Course.

A first course aiming to cover as completely as possible the ordinary techniques and applications of calculus.

Limits of functions, differentiation and integration of polynomials with applications; second derivative and differentiation of algebraic, exponential and logarithmic functions; curvature; definite integral.

Differentiation and integration of trigonometric functions; methods of integration; improper integrals; applications of the definite integrals; approximate integrals; partial derivatives; multiple integrals; expansion of functions.

Lectures: 3 hours per week for two terms.

Text: Middlemiss, *Differential and Integral Calculus*. McGraw-Hill.

206 Analytic Geometry of Two and Three Dimensions. Half Course.

This course, which begins with conic sections, embraces the chief topics of plane and space geometry that are of common interest to both the science and the engineering student. It includes the following: the principal properties of the parabola, the ellipse, the hyperbola; coordinate transformations and polar coordinates; method of distinguishing type of conic from its un-reduced equation; some higher plane curves; parametric equations; cartesian spherical and cylindrical coordinates in space; equations of lines, planes, cylinders, cones, and surfaces of revolution; an introduction to the study of quadric surfaces.

Lectures: 3 hours per week for one term.

Text: Smith, Salkover and Justice, *Analytic Geometry*. Wiley.

208 Algebra. Full Course.

The first part of this course aims at an accurate working familiarity with the following topics: real numbers; decimal approximations; abbreviated methods of computation; inequalities; complex numbers; formal and functional properties of polynomials; polynomial equations; rational functions.

The second part embraces the following topics: solution of cubic and quartic equations by radicals; systems of linear equations; determinants; matrices; linear transformations (projecture and complex); symmetric functions of the roots of an equation; approximation of irrational numbers by rationals; impossibility of angle trisection by ruler and compass; sequences; limits; summation of series.

Lectures: 3 hours per week for two terms.

Text: Courant and Robbins, *What is Mathematics?* Oxford.

209 Algebra. Half Course.

This course comprises of topics in Algebra. It is a combination of Mathematics 109 and 307.

Lectures: 2 hours per week for two terms.

210 Analytical Geometry and Calculus. Full Course.

A second course in Analytical Geometry and Calculus.

Lectures: 3 hours per week for two terms.

214 Algebra and Calculus. Full Course.

A continuation of Mathematics 204. Topics in Algebra and Calculus; elementary differential equations.

Lectures: 3 hours per week for two terms.

307 Algebra and Spherical Trigonometry. Half Course.

This course comprises a practical treatment of spherical trigonometry and of the topics of algebra which are necessary for the study of differential equations and are not adequately treated in Mathematics 109.

Lectures: 3 hours per week for one term.

Texts: Hart and Hart, *Solid Geometry and Spherical Trigonometry*. Heath. Sokolnikoff, *Higher Mathematics for Engineers and Physicists*. McGraw-Hill.

308 Algebra and Calculus. Half Course.

A continuation of Mathematics 205 and 207.

Lectures: 2 hours per week for two terms.

Text: Sokolnikoff, *Higher Mathematics for Engineers and Physicists*. McGraw-Hill.

309 Ordinary Differential Equations. Half Course.

A first course, with numerous applications to problems of chemistry, engineering, mathematics and physics.

Lectures: 2 hours per week for two terms.

Text: Kells, *Elementary Differential Equations*. McGraw-Hill.

311 Real and Complex Analysis. Full Course.

Infinite Series and Integrals: a study of the infinite processes used in applied mathematics, with a view to securing an effective manipulation.

Functions of a Complex Variable. A first course.

Lectures: 3 hours per week for two terms.

Text. Knopp, *Theory of Functions*. Part 1. Dover.

412 Real and Complex Analysis. Full Course.

A continuation of Mathematics 311. Functions of a Real Variable; Functions of a Complex Variable.

Lectures: 3 hours per week for two terms.

Texts: Titchmarsh, *The Theory of Functions*. Oxford. Knopp, *Theory of Functions*. Part II. Dover.

414 Problems of Advanced Calculus. Full Course. (not offered in 1964-65)

A series of interesting and difficult mathematical assignments intended to integrate the student's knowledge of algebra, analytic geometry and advanced calculus.

Lectures and Lab: 2 hours per week for two terms.

415 Modern Algebra. Full Course.

The structure of number systems; integral domains, ordering factorization, fields, continuity, algebraic closures; groups, vector spaces; matrices and linear groups; algebra of classes; transfinite arithmetic; algebraic number fields; Galois theory.

Lectures: 3 hours per week for two terms.

Text: Birkoff and MacLane, *A Survey of Modern Algebra*. Macmillan.

416 Number Theory. Half Course.

An introduction to the problems and methods of elementary and analytic number theory.

Lectures: 3 hours per week for one term.

417 History of Mathematics. Half Course. (not offered in 1964-65)

Lectures: 1 hour per week for two terms.

418 Numerical Analysis. Half Course.

Lectures: 3 hours per week for one term.

Courses leading to an Honours B.Sc. in Mathematics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	French	English	MATHEMATICS 412
Chemistry 102	MATHEMATICS 208	MATHEMATICS 311	MATHEMATICS 416
English 101	MATHEMATICS 209	MATHEMATICS 415	MATHEMATICS 417
French	MATHEMATICS 308	Philosophy 303	MATHEMATICS 418
MATHEMATICS 106	MATHEMATICS 309	Theology	Philosophy 404
MATHEMATICS 205	Philosophy 202	Electives (2)	Physics 410
MATHEMATICS 206	Physics 310		
Physics 101	Theology		
Theology 101			

Courses leading to a B.Sc. with a Major in Mathematics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Chemistry 231	English	MATHEMATICS 311
Chemistry 102	French	MATHEMATICS 308	MATHEMATICS 415
English 101	MATHEMATICS 205	MATHEMATICS 309	Philosophy 404
French	MATHEMATICS 208	Philosophy 303	Electives (2)
MATHEMATICS 107-	MATHEMATICS 209	Physics 205	
and-108 or 205	Philosophy 202	Physics 310	
MATHEMATICS 206	Theology	Theology	
Physics 101			
Theology 101			

modern languages

A. E. Lauziere	Professor
Rev. A. Nelson, S.J.	Associate Professor
H. H. Lau	Assistant Professor
A. S. Michalski (Acting Department Chairman)	Assistant Professor
P. Toupin	Assistant Professor
J. J. Couvrette	Lecturer
A. Hamper	Lecturer
J. Mackriss	Lecturer
M. Pavitt	Lecturer
C. Rouben	Lecturer
L. W. Sugden	Lecturer
D. Yates	Lecturer
Rev. Sr. Maria Anastasia, O.S.B.	Lecturer

French

100 Full Course.

Essentials of phonetics and grammar. This is a lecture and laboratory course for students who have not yet studied the language.

Lectures and Lab: 3 hours per week for two terms.

120 Full Course.

Staff

Grammatical review; intermediate composition; phonetics and selected readings from contemporary authors. This is a lecture and laboratory course for students who do not speak the language but who have studied it in High School.

Lectures and Lab: 3 hours per week for two terms.

140 Full Course.

Composition; readings from great authors of the 19th and 20th centuries. For students who speak the language fluently and have studied it in High School.

Lectures: 3 hours per week for two terms.

200 Full Course.

Functional grammar and conversation; composition. This is a lecture and laboratory course.

Prerequisite: French 100.

Lectures and Lab: 3 hours per week for two terms.

220 Full Course.

Composition and introduction to the contemporary civilization of France and French-Canada.

Prerequisite: French 120 or passing grade in the placement examination.

Lectures: 3 hours per week for two terms.

240 Full Course.

Advanced composition; study of great authors of the 17th and 18th centuries.

Prerequisite: French 140 or the placement examination.

Lectures: 3 hours per week for two terms.

320 Literature of the Eighteenth century. Full Course.

J. J. Couvrette

Prerequisite: French 240 or permission of the Department.

Lectures: 3 hours per week for two terms.

330 Literature of the Nineteenth century. Full Course.

A. E. Lauziere

Prerequisite: French 240 or permission of the Department.

Lectures: 3 hours per week for two terms.

340 Literature of French Canada. Full Course. A. E. Lauziere

Prerequisite: French 240 or permission of the Department.

Lectures: 3 hours per week for two terms.

350 The French Novel of the Twentieth century. Full Course. (not offered in 1964-65)

Prerequisite: French 240 or permission of the Department.

Lectures: 3 hours per week for two terms.

420 Literature of the Sixteenth and Seventeenth centuries. Full Course.

C. Rouben

Prerequisite: French 320, 330, 340, 350, or permission of the Department.

Lectures: 3 hours per week for two terms.

430 Literature of the Twentieth century. Full Course.

P. Toupin

Prerequisite: French 320, 330, 340, 350, or permission of the Department.

Lectures: 3 hours per week for two terms.

440 French lyrical poetry from the Middle Ages to the Present. Full Course. (not offered in 1964-65)

Prerequisite: French 320, 330, 340, 350, or permission of the Department.

Lectures: 3 hours per week for two terms.

450 Advanced stylistics. Full Course. (not offered in 1964-65)

Prerequisite: French 320, 330, 340, 350, or permission of the Department.

Lectures: 3 hours per week for two terms.

460 History of the French language (Advanced Phonetics). Full Course. (not offered in 1964-65)

Prerequisite: French 320, 330, 340, 350, or permission of the Department.

Lectures: 3 hours per week for two terms.

470 Comparative Literature of the Eighteenth Century (French and English). Full Course.

Prerequisite: French 320, 330, 340, 350, or permission of the Department.

Lectures: 3 hours per week for two terms.

NOTE: Students interested in the advanced courses should consult the Department before registration.

German

100 Full Course.

An introductory course for students with no previous knowledge of German.

Lectures: 3 hours per week for two terms.

Spanish

100 Functional Spanish. Full Course.

A. S. Michalski

Essentials of pronunciation and grammar; composition; graded reading of Spanish texts. For students with no previous knowledge of Spanish.

Lectures: 3 hours per week for two terms.

Text: *Modern Spanish*. A project of the Modern Language Association. Harcourt-Brace.

200 Intermediate Spanish. Full Course.

A. S. Michalski

Grammar review; practice in conversation composition; selections from the writings of the 19th and 20th centuries introducing the student to the literature and the civilization of Spain and of Spanish America.

Lectures: 3 hours per week for two terms.

320 Full Course.

A. S. Michalski

Contemporary literature. Advanced composition and conversation.

Lectures: 3 hours per week for two terms.

330 Survey of Spanish Literature. Full Course. (not offered in 1964-65)

A chronological consideration of Spanish writers from the *Poema de mio Cid* to the post-war period.

Lectures: 3 hours per week for two terms.

340 Literature of the Golden Age. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

370 Advanced stylistics and phonetics. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

420 Literature of the Nineteenth century. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

430 Twentieth-century literature in Spain. Full Course. (not offered in 1964-65)

From the Generation of '98 to the present day.

Lectures: 3 hours per week for two terms.

440 Latin American literature. Full Course. (not offered in 1964-65)

From the colonization period to the present day, with particular emphasis on 20th-century authors.

Lectures: 3 hours per week for two terms.

450 Cervantes. Full Course. (not offered in 1964-65)

Lectures: 3 hours per week for two terms.

460 Old Spanish language and literature. Full Course. (not offered in 1964-65)

Readings in medieval texts.

Lectures: 3 hours per week for two terms.

Note: Unless there is a sufficient number of applicants, the advanced courses will not be offered this year. Interested students should consult the Department before registration.

Courses leading to a B.A. with a Major in French.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	FRENCH Electives (2) from 320, 330, 340, 350	FRENCH Electives (3) from 420, 430, 440, 450, 460, 470
English 101	English	Philosophy 303	Philosophy 404
FRENCH 120 or 140	FRENCH 220 or 240	Theology	Philosophy Elective (1)
Mathematics 101	Philosophy 202	Elective (1)	
Theology 101	Theology		
Elective (1)	Elective (1)		

Courses leading to a B.A. with a Major in Spanish.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	Philosophy 303	Philosophy 404
English 101	English	SPANISH Electives (2) from 320, 330, 340	Philosophy Elective (1)
French 100 or 120 or 140	French 200 or 220 or 240	Theology	SPANISH Electives (3) from 420, 430, 440, 450, 460
Mathematics 101	Philosophy 202	Elective (1)	
SPANISH 100	SPANISH 200		
Theology 101	Theology		
	Elective (1)		

Students with some prior knowledge of Spanish will follow a more advanced sequence of courses. Please consult with the Department.

Latin-American students, coming from Spanish language high schools and intending to take Spanish as an elective or to Major in Spanish, will receive credit only if they begin at the 300 level.

philosophy

R. C. Hinners	Associate Professor
J. P. Doyle (Acting Department Chairman)	Assistant Professor
W. Arnold	Assistant Professor
R. Becka	Assistant Professor
A. S. Kawczak	Assistant Professor
J. D. Morgan	Assistant Professor
M. F. Reidy	Assistant Professor
E. J. Roesch	Assistant Professor
A. G. O'Connor	Sessional Lecturer

202 Metaphysics. Full Course.

The basic principles and problems of Metaphysics including: being; change; cause; time; space; origin and nature of matter; existence and nature of God. A general introduction to philosophy precedes the course.

Lectures: 3 hours per week for two terms.

Text: Smith and Kendzierski, *The Philosophy of Being*. Macmillan.

303 Psychology and Epistemology. Full Course.

The philosophical study of man: his unity; origin; nature and destiny; the human soul; intellect; will; habits and sense activities. Problem of Knowledge.

Lectures: 3 hours per week for two terms.

Text: Royce, *Man and his Nature*. McGraw-Hill.

304 Symbolic Logic. Half Course. (not offered in 1964-65)

The methods of Symbolic Logic and some applications to the analysis of the structure of axiomatic and empirical sciences.

Lectures: 3 hours per week for one term.

Text: Copi, *Symbolic Logic*. Macmillan.

305 Philosophy of Science. Half Course. (not offered in 1964-65)

Lectures: 3 hours per week for one term.

306 Development of Logic. Half Course.

An examination of the three stages in the development of Logic: Aristotelian, Scholastic and modern Mathematical Logic.

Lectures: 3 hours per week for one term.

Text: Boehner, *Medieval Logic*. Manchester Univ. Press.

307 Induction and Scientific Method. Half Course.

A study of inductive reasoning and scientific methods as applied in different branches of knowledge.

Lectures: 3 hours per week for one term.

Text: Braithwaite, *Scientific Explanation*. Harper.

404 Ethics. Full Course.

The general principles of morality and a detailed study of individual and social ethics.

Lectures: 3 hours per week for two terms.

Text: Higgins, *Man as Man*. Bruce. Leibell, *Reading in Ethics*. Loyola Univ. Press.

405 History of Greek Philosophy. Half Course.

A survey of the history of Greek philosophy from the Ionians to the neo-Platonists. Special emphasis will be placed on the thought of Plato and Aristotle.

Lectures: 3 hours per week for one term.

Text: Coppleston, *History of Philosophy*. Doubleday. Vol. 1, pts. 1 and 2.

406 History of Medieval Philosophy. Half Course.

The main currents of medieval thought from Augustine to Aquinas. Complementing the history of philosophy, some account will be given of medieval academic and religious institutions.

Lectures: 3 hours per week for one term.

Text: Coppleston, *History of Philosophy*. Doubleday. Vol. 2, pts. 1 and 2.

407 History of Modern Philosophy. Full Course.

Discussion and critical evaluation of the major modern philosophers and philosophic movements with special emphasis on Descartes, Hobbes, Locke, Hume, Kant and Hegel.

Lectures: 3 hours per week for two terms.

Text: Coppleston, *History of Philosophy*. Burns and Oates. Vols. 4, 5 and 6.

408 Contemporary Philosophic Movements. Full Course.

A study of the more significant trends of thought influencing contemporary society. The course will examine critically the nineteenth century origins and contemporary forms of selected philosophical schools. Special attention will be given to Existentialism; Dialectical Materialism; Pragmatism and Logical Empiricism.

Lectures: 3 hours per week for two terms.

Text: Bochenski, *Contemporary European Philosophy*. Univ. of Calif. Press.

409 Problems and Selected Topics in Modern Philosophy. Full Course. (not offered in 1964-65)

A study, with a realistic appraisal, of special problems and subjects in modern philosophy, with emphasis on the tie between practice and philosophical thought.

Lectures: 3 hours per week for two terms.

Courses leading to a B.A. with a Major in Philosophy.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	History Elective (1) PHILOSOPHY 303	History Elective (1) PHILOSOPHY 404
English 101	English	PHILOSOPHY 306	PHILOSOPHY 407
French	French	PHILOSOPHY 307	PHILOSOPHY 408
History 101	PHILOSOPHY 202	PHILOSOPHY 405	Political Science
Mathematics 101	Political Science 201	PHILOSOPHY 406	Elective (1)
Natural Science Elective (1)	Theology	Theology	
Theology 101			

physics

Rev. H. J. MacPhee, S.J. (Department Chairman) Professor
 C. E. Eappen Assistant Professor
 S. Santhanam Assistant Professor
 J. C. Legge Lecturer
 E. A. MacPhee Lecturer
 L. C. Smith Lecturer

- 101 General College Physics. Full Course.** E. A. MacPhee
 An introductory course on the elements of mechanics, sound, heat, electricity and light.

Lectures: 3 hours per week for two terms.

Lab: 1 period per week for two terms.

- 103 Heat and Light. Full Course. (not offered in 1964-65)**
 A treatment more advanced than Physics 101, that supposes calculus is taken simultaneously.

- 204H Electricity and Magnetism. Full Course.**

Electrostatic field, capacitance, dielectrics, direct current, thermoelectricity, magnetic fields, electromagnetic induction, alternating current, Maxwell's equations.

Lectures: 2 hours per week for two terms.

Lab: 1 period per week for two terms.

- 205 Electricity and Magnetism. Full Course.**

A treatment similar to Physics 204 but replacing Maxwell's equations by additional work on circuits.

Lectures: 3 hours per week for two terms.

Lab: 1 period per week for two terms.

- 206H Properties of Matter. Half Course.**

Experiments in acceleration due to gravity, moments of inertia, elasticity, gyroscopic motion, surface tension, etc.

Lab: 1 period per week for two terms.

- 207 Mechanics. Half Course. (not offered in 1964-65)**

Hydrostatics, statics and dynamics of a particle.

Lectures: 3 hours per week for one term.

- 220H Algebra and Vector Theory. Full Course.**

Elements of Modern Algebra, Matrix theory and Vector analysis.

Lectures: 2 hours per week for two terms.

Text: Benner, Newhouse, *et al.*, *Topics in Modern Algebra*. Harper.

- 302 History of Science. Half Course. (not offered in 1964-65)**
 The beginning of Science in the East; the Egyptian, Greek-Roman, "Dark" Ages, Hindu and Arabian, Medieval, Renaissance and Modern Science; Science and Invention of last three centuries.

Lectures: 1 hour per week for two terms.

Text: Sedgwyck and Tyler, *A Short History of Science*. Macmillan.

- 304 Heat. Half Course.**

An introductory course in thermodynamics and kinetic theory. It includes the first and second laws of thermodynamics with ample applications and introduces the Helmholtz and Gibbs functions.

Lectures: 3 hours per week for one term.

Text: Sears, *Electricity and Magnetism*. Addison-Wesley.

- 305H Thermodynamics and Statistical Mechanics. Full Course. (not offered in 1964-65)**

Lectures: 3 hours per week for two terms.

- 306H Introduction to Modern Physics. Full Course.**

Lectures: 3 hours per week for two terms.

Lab: 1 period per week for two terms.

- 307 Electronic Circuits. Full Course.**

L. C. Smith

Characteristics of vacuum tubes and semi-conductors, rectifiers, triodes and transistors, as circuit elements, basic amplifier principles, feedback, special circuitry, electronic instruments, tuned circuits.

Lectures: 2 hours per week for two terms.

Lab: 1 period per week for two terms.

Text: Alley and Atwood, *Electronic Engineering*. Wiley.

- 310 Introduction to Theoretical Mechanics. Full Course.**

H. J. MacPhee

Fundamental principles, statics of a particle and of a rigid body, work and energy, gravitation, principle of virtual work, a particle in a uniform force field, harmonic oscillator, motion of a system of particles, plane motion of a rigid body, central force fields, motion of a particle in an accelerated reference frame, motion under constraints, motion of a rigid body in three dimensions.

Lectures: 3 hours per week for two terms.

Text: Symon, *Mechanics*. Addison-Wesley.

- 320H Operational Mathematics. Full Course.**

Lectures: 3 hours per week for two terms.

- 401 Optics. Half Course.**

C. E. Eappen

Principles of geometric and of physical optics, interference, diffraction, polarization, dispersion, radiation and spectra, magnets and electro-optics, light scattering.

Lectures: 3 hours per week for one term.

Text: Symon, *Mechanics*. Addison-Wesley.

- 406 Atomic Physics. Full Course.**

C. E. Eappen

The first half of this course is for Physics Majors and Engineers; the second half is for Physics Majors alone.

Lectures: 3 hours per week for two terms.

421 Mathematics for Physics and Chemistry. Full Course. (not offered in 1964-65)

Selected topics from Geometry, Algebra and Differential Equations.

Lectures: 3 hours per week for two terms.

The Honours programme in Physics begins, as do all others, in Second Year. To be admitted as a candidate for an Honours B.Sc. in Physics, the student's First Year or Senior Matriculation subjects must have included a full course in Calculus and at least a half-course in Analytic Geometry. An 80% average in science and mathematics is ordinarily required.

Courses leading to an Honours B.Sc. in Physics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	French	Philosophy 303	English
Chemistry 102	Mathematics 308	PHYSICS 305	Philosophy 404
English 101	Mathematics 309	PHYSICS 306	PHYSICS 403
French	Philosophy 202	PHYSICS 307	PHYSICS 404
Mathematics 106	PHYSICS 204	PHYSICS 320	PHYSICS 405
Mathematics 205	PHYSICS 206	PHYSICS 401	PHYSICS 410
Mathematics 206	PHYSICS 220	Theology	PHYSICS 420
PHYSICS 101	PHYSICS 310		
Theology 101	Theology		

Courses leading to a B.Sc. with a Major in Physics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Chemistry 221	Philosophy 303	English
Chemistry 102	Chemistry 222	PHYSICS 205 or	Philosophy 404
English 101	Engineering 210 or	304-and-401	PHYSICS 206-and-403
French	PHYSICS 205	PHYSICS 220 or	or 304-and-307-
Mathematics 106	French	Mathematics 308	and-401
Mathematics 205	Mathematics 308-and-	PHYSICS 307 or a	PHYSICS 310 or
or 107-and-108	309 or 205-and-209	Science Elective (1)	Mathematics 309
Mathematics 206	Philosophy 202	PHYSICS 320 or	PHYSICS 406
PHYSICS 101	Theology	Engineering 310	
Theology 101		Theology	

political science

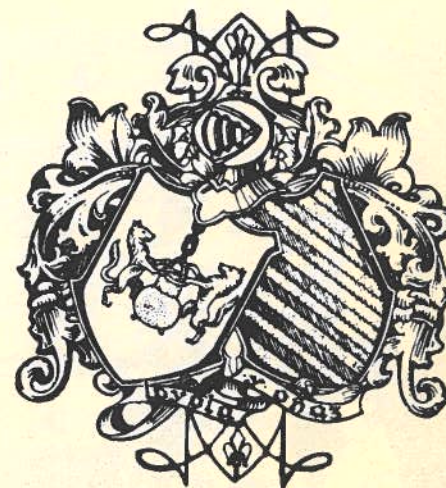
H. Habib (Department Chairman) Assistant Professor
J. M. Little Assistant Professor
R. C. Coyte Lecturer

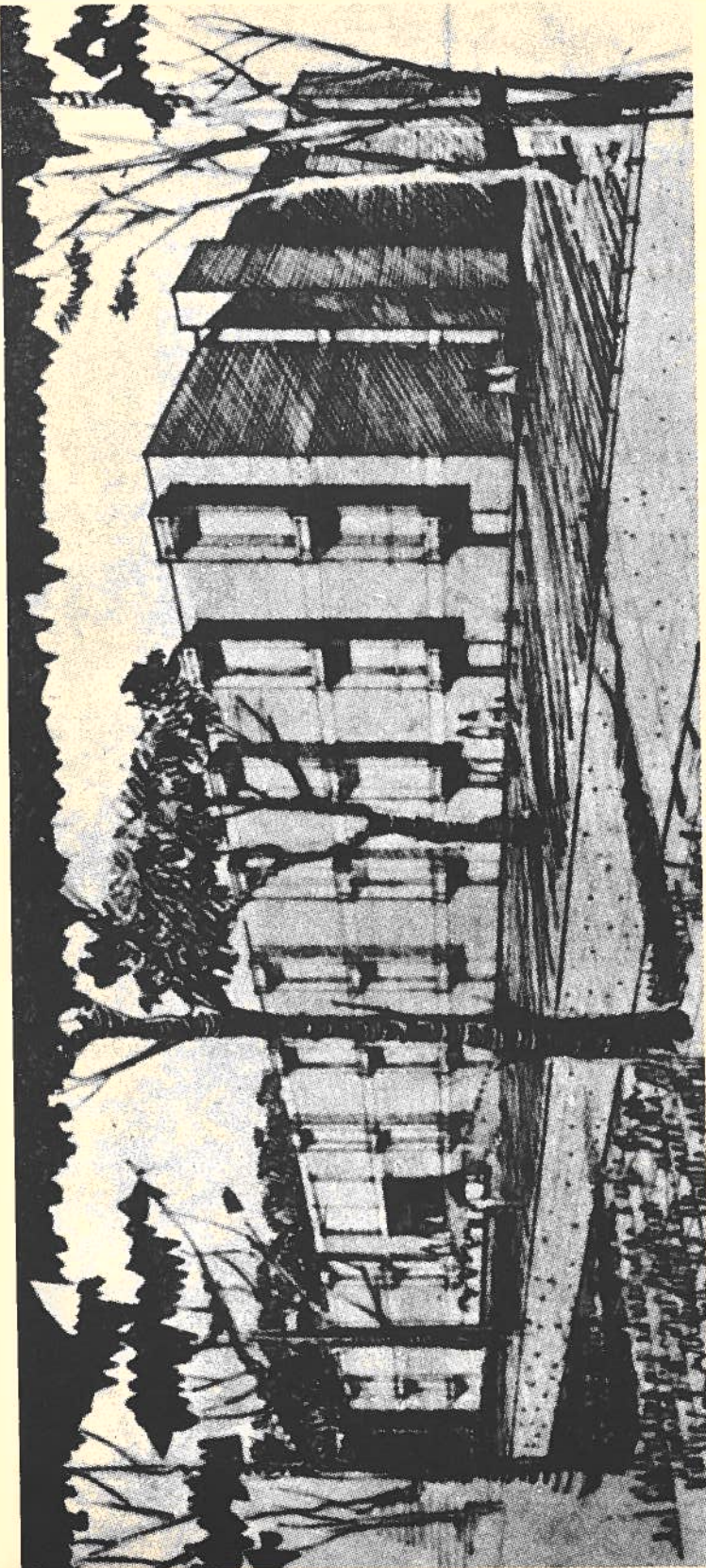
201 An Introduction to Political Science. Full Course. H. Habib

A basic course in the fundamentals and significance of Political Science.

Lectures: 3 hours per week for two terms.

Text: Schultz, *Essentials of Government*. Prentice-Hall.





THE NEW GEORGES P. VANIER LIBRARY

- 211 Britain and the Commonwealth. Full Course.** R. C. Coyte
Government and Politics of Great Britain, and the nature and future of Commonwealth relations.
Lectures: 3 hours per week for two terms.
Text: Carter-Hertz, *Major Foreign Powers*, Harcourt, Brace and World. Miller, *The Commonwealth in the World Today*, Dutchworth.
- 217 The Middle East. Full Course.** H. Habib
Government and Politics of the Middle East. A historical and political Survey.
Lectures: 3 hours per week for two terms.
Texts: Kirk, *A Short History of the Middle East*. Methuen. Harari, *Government and Politics of the Middle East*. Prentice-Hall.
- 229 Public Administration. Full Course. (not offered in 1964-65)**
A theoretical study of government management and institutions, based on the Canadian administrative experience and related to Anglo-American comparative practice.
Lectures: 3 hours per week for two terms.
Text: Hodgetts and Corbett, *Canadian Public Administration*. Macmillan.
- 237 International Law. Full Course. (not offered in 1964-65)**
An introduction to International Law.
Lectures: 3 hours per week for two terms.
Text: Svarlien, *Introduction to the Law of Nations*. McGraw-Hill.
- 251 Canadian Government. Full Course.** J. M. Little
An institutional and functional analysis of the political process in Canada.
Prerequisite: Political Science 201 or equivalent.
Lectures: 3 hours per week for two terms.
Text: Dawson, *Government of Canada*. Toronto, Un. Press.
- 257 American Government. Full Course. (not offered in 1964-65)**
A study of the American Political Institutions.
Prerequisite: Political Science 201 or equivalent.
Lectures: 3 hours per week for two terms.
Text: Burns and Peltason, *Government of the People*. Prentice-Hall.
- 271 International Politics. Full Course.** J. M. Little
A theoretical analysis of inter-state relations, drawing upon developments in the Foreign Policy, Diplomacy and International Organization of the Twentieth Century.
Lectures: 3 hours per week for two terms.
Text: Schleicher, *Introduction to International Relations*. Prentice-Hall.

311 Government and Politics of Western Europe. Full Course.**H. Habib**

A survey of contemporary political systems, forces and problems in Western Europe with special emphasis on France and Germany.

Lectures: 3 hours per week for two terms.

Text: Carter-Herz, *Major Foreign Powers*. Harcourt, Brace and World.

317 Political Theory. Full Course.**J. M. Little**

A critical development of political thought from Plato to the present.

Prerequisite: Political Science 201 or approval of the Political Science Department.

Lectures: 3 hours per week for two terms.

Text: Sabine, *A History of Political Theory*. Holt, Rinehart and Winston.

322 Latin American Government. Full Course. (not offered in 1964-65)

Government and Politics of Latin America.

Lectures: 3 hours per week for two terms.

325 African Government and Politics. Full Course. J. Banfield

Colonialism, imperialism, and the rise of nationalism; government and politics of the independent African states.

Lectures: 3 hours per week for two terms.

361 The Soviet Union. Full Course.**R. C. Coyte**

Government and Politics of the Soviet Union. Basic theories of Communism; evolution of the Soviet system.

Lectures: 3 hours per week for two terms.

Text: Fainsod, *How Russia is Ruled*. Howard.

371 Senior Seminar. Full Course.**R. C. Coyte**

Workshop in Problems of Political Science. Method of group inquiry used to forward constructive, critical thinking and jointly reached conclusions.

Seminar: 3 hours per week for two terms. Tutor will direct work in first term.

Courses leading to a B.A. with a Major in Political Science.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	Philosophy 303	Philosophy 404
Economics 102 or History 101	English	POLITICAL Sc. Electives (3)	POLITICAL Sc. 317
English 101	French	Theology	POLITICAL Sc. 371
French	Philosophy 202		Elective (1)
Mathematics 101 or Science Elective (1)	POLITICAL Sc. 201		Elective in social science or other approved by Political Science Dept. (1)
Theology 101	Theology		

A Major in Political Science consists of a minimum of five full courses in the subject, and a Senior Seminar. A student majoring in Political Science must include Political Science 201 and 317 in his program. A student may substitute an economics, or a history course for a Political Science elective with the approval of the Political Science Department.

theology

Rev. E. O'Brien, S.J. (Department Chairman)	Professor
Rev. C. H. Henkey (Acting Department Chairman)	Associate Professor
C. M. Going	Assistant Professor
C. McGrath	Assistant Professor
Rev. G. O'Brien, S.J.	Assistant Professor
A. C. Dechene, Jr.	Lecturer
Rev. J. J. English, S.J.	Lecturer
Rev. W. Bedard, O.F.M.	Instructor
Rev. L. B. Geiger, O.P.	Instructor
Rev. J. Harvey, S.J.	Instructor

Courses in Religious Studies are offered to students who are not Roman Catholics.

Courses in Theological Studies are limited to students who are Roman Catholics.

Religious studies**115 Literature of the Bible. Full Course.****Staff**

A literary analysis of the Judaeo-Christian Scriptures.

Lectures: 2 hours per week for two terms.

Texts: *The Complete Bible*. Chicago. Anderson, *Understanding the Old Testament*. Prentice-Hall. Henshaw, *New Testament Literature*. Allen & Unwin.

215 Reason and Religion. Full Course.**C. McGrath**

An analysis of representative approaches, past and present, to the problems of the authentic nature of religion, of the knowledge of God, of the existence of evil, of personal immortality.

Lectures: 2 hours per week for two terms.

Texts: Otto, *The Idea of the Holy*. Galaxy. Eliade, *The Sacred and the Profane*. Torchbook. Kierkegaard, *Fear and Trembling*. Anchor. Bergson, *The Two Sources of Morality and Religion*. Anchor. Buber, *The Prophetic Faith*. Torchbook.

- 315 Comparative Religion. Full Course.** G. O'Brien
An introductory course for upperclass students.
Lectures: 2 hours per week for two terms.
Texts: Eliade, *Patterns in Comparative Religion*. Meridian.
James, *Comparative Religion*. University.
Further Readings: Eliade, *The Sacred and the Profane*. Torchbook. James, *The Ancient Gods*. Weidenfeld & Nicholson.
Otto, *The Idea of the Holy*. Galaxy.

Theological studies

Minimum requirements: 101 and one course from Group A and one from Group B.

- 101 Introductory Theology. Full Course.** Staff
The nature and function of Christian theology and the areas to which it traditionally addresses itself, with especial emphasis (in Second Term) upon the Theology of Man.
Lectures: 2 hours per week for two terms.
Texts: *The Complete Bible*. Chicago. *Introductory Readings in Theology*. Loyola. Haring, *The Law of Christ*. Mercier. Vol. I.

GROUP A

- 203 The Faith of the Christian. Full Course.** C. M. Going
A study of the act of faith as this act has been understood in Scripture and in some classic theological statements; faith as human commitment in the vocabulary of Christian thought, Catholic and non-Catholic.
Lectures: 2 hours per week for two terms.
Texts: *The Complete Bible*. Chicago. Aquinas, "Tract on Faith," Selections from *Summa Theologicae*. II-II. Loyola. von Balthasar, *Science, Religion and Christianity*. Burns & Oates. Heaney, ed., *Faith, Reason and the Gospels*. Newman. De Lubac, *Catholicism*. Universe. Mouroux, *I Believe*. Sheed. Newman, *Grammar of Assent*. Image.
Further Readings: Hazelton, ed., *Selected Writings of St. Augustine*. Meridian. Herberg, ed., *The Writings of Martin Buber*. Meridian. Kierkegaard, *Fear and Trembling*. Anchor. MacKenzie, *Faith and History in the Old Testament*. Minnesota. Rahner, *The Theology of Death*. Herder & Herder. Tillich, *The Dynamics of Faith*. Torchbook. Selected periodical literature.
208 Ecumenism. Full Course. C. H. Henkey
A dogmatic and empirical study of the meaning of the Mystical Body as a distinct, visible, incarnational reality in the Economy of Salvation, of how the intransigent *No salvation outside the Church* is not contrary to the saving will of God, and of how the Church arrives at a fuller understanding of her mission in the uniting of Christians.
Lectures: 2 hours per week for two terms.
Texts: Meyendorff, *The Orthodox Church*. Pantheon. Tavad, *Two Centuries of Ecumenism*. Mentor. Whelan, *Separated Brethren*. Bruce.
Further Readings: Mascal, *The Recovery of Unity*. Longmans.

- 306 The Theology of the State. Full Course.** A. C. Dechene Jr.
The state seen in the light of the Bible's proclamation of the Kingdom of God. What is the place of the state in the divine plan?
Lectures: 2 hours per week for two terms.
Texts: *The Complete Bible*. Chicago. St. Augustine, *The City of God*. Image. Bourke, *The Pocket Aquinas*. Washington Square. Bright, *The Kingdom of God*. Abingdon. Cullmann, *The State of the New Testament*. SOM.

- 308 The Foundations of Behaviour. Full Course.** A. C. Dechene, Jr.
Special questions on the Theology of Man, from Scripture and Christian tradition.
Lectures: 2 hours per week for two terms.
Texts: *The Complete Bible*. Chicago. Pegis, *Basic Writings of St. Thomas Aquinas*. Random House. Vol. 2.

- 401 The Nature of Christian Belief. Half Course.** C. M. Going
An advanced analysis of the act of faith in the light of Scripture, tradition and contemporary concern.
Lectures: 2 hours per week for first term.
Texts: *The Complete Bible*. Chicago. Aquinas, "Tract on Faith," Selections from *Summa Theologicae*. II-II. Loyola. Heaney, ed., *Faith, Reason and the Gospels*. Newman. Mouroux, *I Believe*. Sheed. Newman, *Grammar of Assent*. Image.
Further Readings: Anderson, ed., *The Old Testament and Christian Faith*. Harper. von Balthasar, *Science, Religion and Christianity*. Burns & Oates. Barth, *Dogmatics in Outline*. Torchbook. Bultmann, "Faith," *Bible Key Words*. Harper. Vol. 3. Hazelton, ed., *Selected Writings of St. Augustine*. Meridian. Kierkegaard, *Fear and Trembling*. Anchor. Tillich, *The Dynamics of Faith*. Torchbook. Wright, *The Old Testament against its Environment*. SOM. Selected periodical literature.

- 402 Father, Son and Holy Spirit. Half Course.** C. M. Going
The doctrine of the Trinity as this is presented in the Scripture, in the theological works of Augustine and Thomas, and in contemporary theological literature.
Lectures: 2 hours per week for second term.
Texts: *The Complete Bible*. Chicago. Aquinas, "Tract on the Trinity," Selections from *Summa Theologicae*. I. Loyola. Augustine, *On the Trinity*. Selections. Loyola. Danielou, *God and the Ways of Knowing*. Meridian.
Further Readings: Chirico, *The Divine Indwelling and Distinct Relations to Indwelling Persons*. Gregorian. Cochrane, *Christianity and Classical Culture*. Galaxy. Kelly, *Early Christian Creeds*. Longmans. Lonergan, *De Deo Trino*. Gregorian. Weiser, "The Spirit of God," *Bible Key Words*. Harper. Vol. 3. Selected periodical literature.

- 410 Colloquium. Full Course.** Staff
Individually directed research for advanced students.

GROUP B

Scripture Courses

222 The Two Testaments. Full Course. J. J. English

A study of the Second Adam theme throughout the Scriptures.

Lectures: 2 hours per week for two terms.

Texts: Gelin, *The Key Concepts of the Old Testament*. Deus. Jones, *Unless Some Man Show Me*. Deus. Rowley, *The Growth of the Old Testament*. Torchbook. Scriptural commentaries to be announced.

Further Readings: Charlier, *The Christian Approach to the Bible*. Newman.

225 The Johannine Writings. Full Course. (not offered in 1964-65)

Gospel, Letters and Apocalypse interpreted in the context of first century theology.

Lectures: 2 hours per week for two terms.

Text: *The Complete Bible*. Chicago.

Further Readings: Brown, *Gospel of Saint John and the Johannine Epistles*. Liturgical Press. Richardson, *Gospel According to John: a Commentary*. Collier.

227 "Knowledge of God" in Scripture. Full Course. C. McGrath

An attempt to discover the Old and New Testament answers to such questions as: Can man acquire any knowledge of God? By what means? How is it related to faith? Does it require special assistance from God? What are the frontiers it cannot pass? How is such knowledge related to, or dependent on, the moral state of the knower? These and similar questions will be approached from the basis of detailed inspection of texts from all stages of biblical awareness of God.

Lectures: 2 hours per week for two terms.

Texts: *The Complete Bible*. Chicago. Adam, *The Christ of Faith*. Mentor-Omega. Gelin, *The Key Concepts of the Old Testament*. Deus.

324 The Psalms. Full Course. J. Harvey

The historical, literary and theological interpretation of select Psalms.

Lectures: 2 hours per week for two terms.

Texts: *The Complete Bible*. Chicago. Weiser, *The Psalms*. Westminster.

Historical Courses

235 The Fatherhood of God in the Liturgies and the Fathers. Full Course. W. Bedard

The significance of the *Our Father* in the life of the early Church studied through the various liturgies and the commentaries of the Church Fathers. The awareness of the fatherhood of God as related to the image of the Church in the Vatican Council II: the people of God, God being Father.

Lectures: 2 hours per week for two terms.

Texts. *The Roman Missal*. Augustine, *The Lord's Sermon on the Mount*. Newman. Additional readings to be announced.

332 The Evolution of Theology. Full Course. (not offered in 1964-65)

Christian theology historically considered in its chief representatives from Irenaeus to the present.

Lectures: 2 hours per week for two terms.

333 Development of Christian Thought. Full Course. G. O'Brien

A survey of the history of the Church with special reference to the General Councils of the Church, the early heresies, the problems of Church and state, the rise of Protestantism, the challenge of Liberalism, the crisis over Papal Infallibility, the onslaught of Modernism and the immoderate reaction which culminated in Integralism; the pastoral concern of the second quarter of the twentieth century which promoted a revival of biblical studies, interest in the liturgy and a new emphasis in patristic studies.

Lectures: 2 hours per week for two terms.

Texts: Hughes, *A Popular History of the Catholic Church*. Image. O'Brien, *Readings in the History of Ideas*. Loyola.

Further Readings: Butler, *The Idea of the Church*. Helicon. Hales, *The Catholic Church in the Modern World*. Image. Hughes, *The Church in Crisis*. Doubleday. de Lubac, *Catholicism*. Universe. Suhard, *Growth or Decline*. Fides.

Author Courses

245 St. Thomas. Half Course. L.-B. Geiger

A textual analysis of the *Summa Theologicae*. II-II, q. 1 ff. as basis for the discussion of contemporary concerns about the essence of faith.

Lectures: 2 hours per week for second term.

Text: *Summa Theologicae*. II-II, qq. 1-7. Loyola.

348 Newman. Full Course. G. MacGuigan

The course will begin with the autobiographical writings and move from the Sermons through the controversies to his fully developed theological and philosophical inquiries.

Lectures: 2 hours per week for two terms.

Texts: Newman, *Apologia*. Image. *Grammar of Assent*. Image. *Essay on Development*. Image.

349 Karl Rahner. Full Course.

C. H. Henkey

A textual introduction to the "most modern and most orthodox" of contemporary theologians and his attempts to incorporate into dogma the achievements of present-day philosophical and psychological insight.

Lectures: 2 hours per week for two terms.

Texts: Rahner, *Free Speech in the Church*. Sheed. *Inspiration in the Bible*. Herder & Herder. *On the Theology of Death*. Herder & Herder. *Theological Investigations*. Darton, Longman & Todd. Vol. 1.

Further Readings: *The Episcopate and the Primacy*. Herder & Herder. *Nature and Grace*. Stagbook.

Courses leading to an Honours B.A. in Theology.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	Philosophy 303	Philosophy 404
English 101	French	Social Science	THEOLOGY
French	Philosophy 202	Elective (1)	Electives (3)
History 101	THEOLOGY	THEOLOGY	
Mathematics 101	Electives (3)	Electives (3)	
THEOLOGY 101			

Courses leading to a B.A. with a Major in Theology.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 121	Classics 202 or 221 or 222	Philosophy 303	Philosophy 404
English 101	English	Philosophy Elective(1)	Philosophy Elective (1)
French	French	Social Science	Social Science
History 101	Philosophy 202	Elective (1)	Elective (1)
Mathematics 101	THEOLOGY	THEOLOGY	THEOLOGY
THEOLOGY 101	Electives (2)	Electives (2)	Electives (2)

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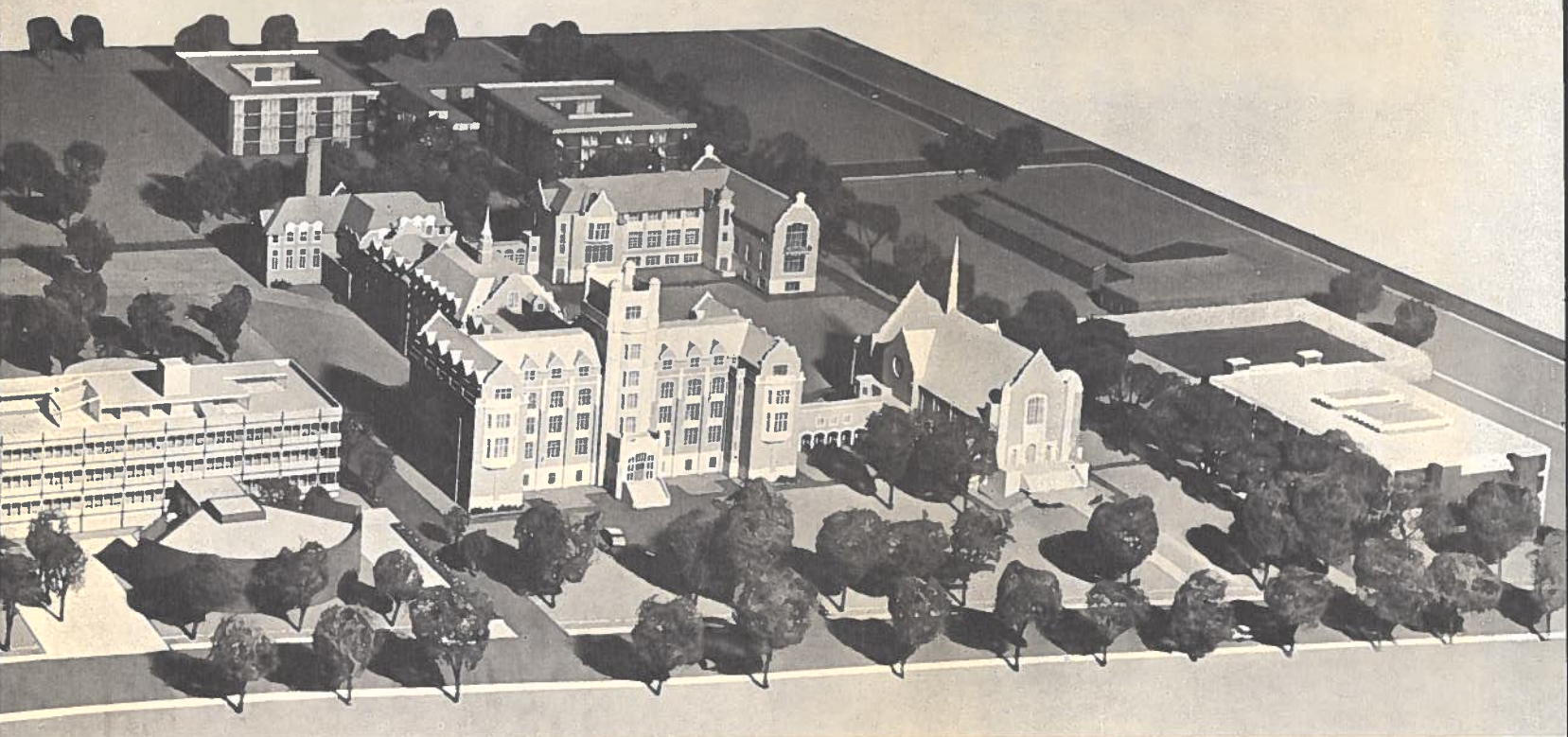
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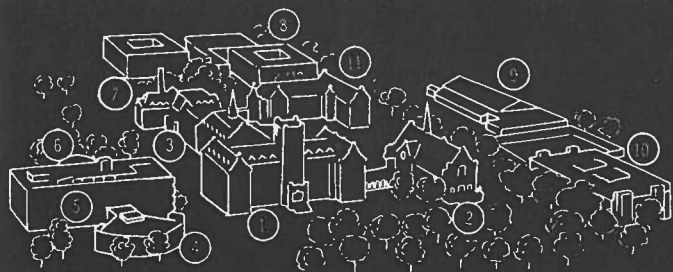
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| 4 Drummond Science Auditorium | • | 5 Science Building | • | 6 Science Library |
| 7 Refectory Building | • | 8 Hingston Hall (Residence) | • | 9 Stadium |
| 10 Georges P. Vanier Library | • | 11 Junior Building | | |

Not shown on photo of campus model: New High School, Students Union, Faculty Residence, Engineering Building, Athletic Centre.



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